A DEPTH-STUDY OF THE THAAYORR LANGUAGE

OF THE EDWARD RIVER TRIBE

CAPE YORK PENINSULA

Being a description of the Phonology
with a brief grammatical outline
and samples of lexicon and oral literature

by

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of the requirements
for the degree of

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The Department of English
University of Queensland
B r i s b a n e

0.1 OUTLINE of RESEARCH

This thesis describes the phonology of Ta:yoř, and includes an outline of the grammar with samples of lexicon and corpus. The complete depth-study has proved too extensive for the present volume, and a full description of the grammar and lexis is reserved for a subsequent study. Most people at Edward River speak the language now, in their home community on the west coast of Cape York Peninsula. To 140 inhabitants of the south side of the village, it is the medium of daily speech, while to many of the 150 on the north side, it is a well-known second language complementing their Muŋkan-like mother tongues.

The spelling of the name Ta:yoř has varied more than the pronunciation. In Capell's survey, it appears as "Taior, Da:jor, Koko ..." and elsewhere, "Dai'yuri, Taiyeri, Tayor, ... Gugu...Kokko taijari, Ku·k Thayori..." Outsiders reportedly use such forms, but the elders claim its true form is indeed ['ta:yoř(ɛ)].

Brief studies have been made by some few individuals, but none of these has provided any assistance for this thesis. Thus, in early field-trips, a detailed phonetic description of the language was necessary. Later, after attendance at the Workshop of the Summer Institute of Linguistics, a phonemic analysis of the data was made and a phonemic alphabet adopted for recording both elicited materials and oral literature.

A threefold purpose has been maintained: to record as much of the language as possible; to order these materials according to precepts of such theorists as Pike, Elson, Pickett and Longacre: and to prepare the ground for literacy by studying statistical frequency of phonemes. The corpus of elicited

and taped materials gives data for study and analysis. Both men and women have been used as informants, but the principal informant used for the study of phonology was Lawrence Foot.

Descriptive methods adopted are in general accordance with the linguistic theory of K.L.Pike. According to this theory, language consists of emic units, which are culturally significant or meaningful units of language, trimodally structured and hierarchically ordered. Emic units are "well-defined" when they have been described in reference to contrast (by which they are identified), range of variation (with actual physical manifestation) and distribution (in class, hierarchical sequence, and in systemic matrix).

Three distinct, though interrelated, or 'interpenetrating' hierarchies --- phonological, grammatical and lexical --- are distinguishable. This thesis concentrates upon description of the phonological hierarchy. The units of this hierarchy are phoneme, syllable, phonological word and phonological phrase/clause.

Contoids have proved to be similar to those of other languages in Australia, with the retroflexed continuant [ɻ] strongly affecting its environment. The retroflexed and palatalised /l/ are lacking. Five vocoids, a, e, i, o and u, show maximal diversity, being contrastive in both quality and length. Allophonic variation is considerable, but contrast for all phonemes except the glottal stop is conclusive. Certain vowel contrasts, e.g. e/o (and in some word-shapes a/u), differentiate fewer words than do other vowel contrasts (a/i/u).

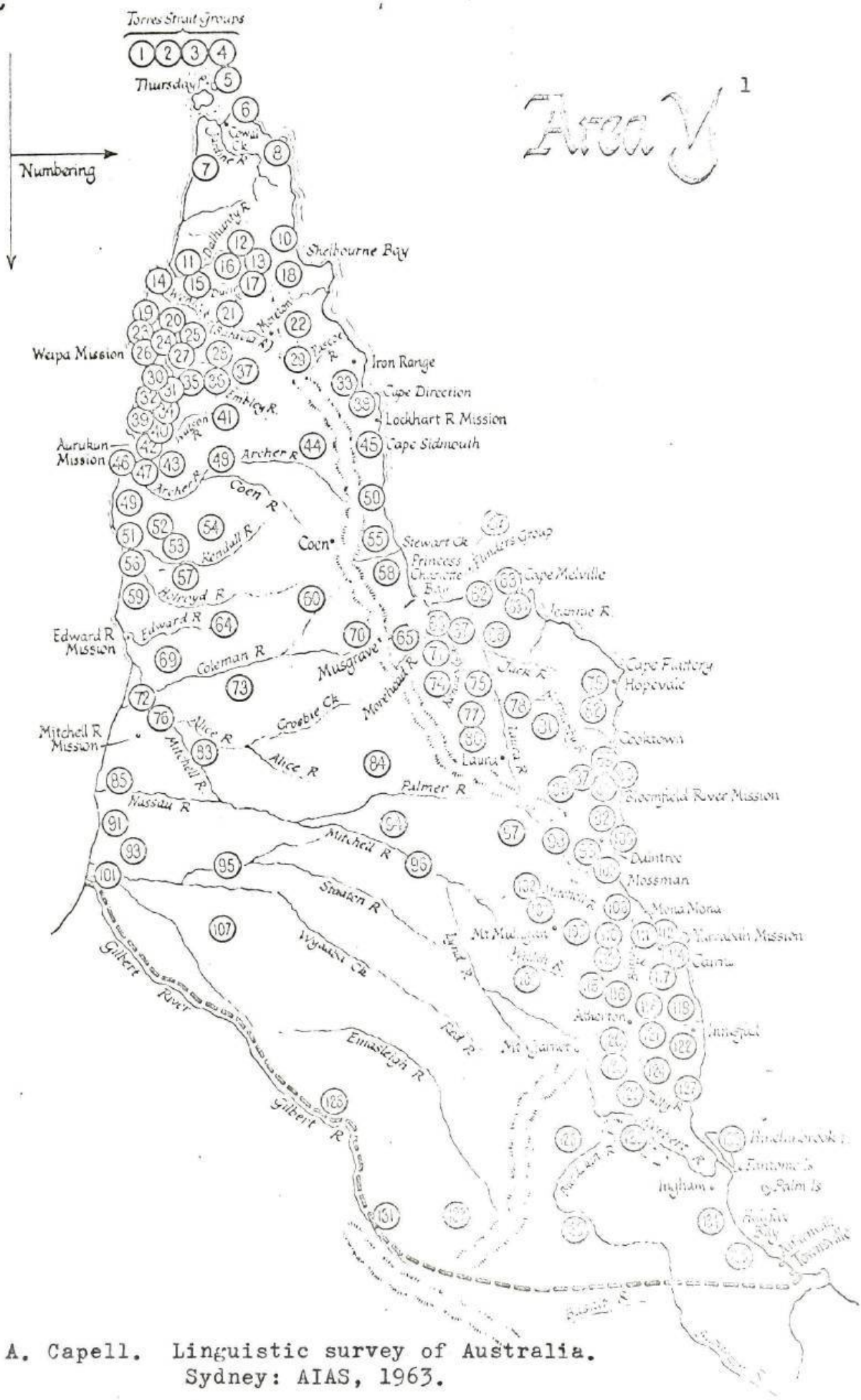
Vowels in unaccented syllables, usually word-finally, are centralised to a shva-like vocoid which somewhat resembles a more basic norm. These allo-words have a strong tendency

towards vowel harmony, which characterises other vowels, whether phonemic or transitional.

Syllable structure is remarkably symmetrical. The fundamental (C)V shape is optionally followed by 1 to 3 consonants, with little restriction in word-formation under four syllables. Initial consonants are often elided when they can be replaced by the final consonant of a preceding word. Many vowel-initial words may receive an additional /ŋ-/ in dialectal variation, as if initial vowels were inadequate to bear the common morpheme-initial stress.

Speech-flow is greatly varied by suprasegmental features. Stress is largely at the beginning of each morpheme, with diminishing of word-initial stress to a medium intensity in words of more than one morpheme. Pitch is high ~ medium ~ low in the formation of intonation contours. These have, in addition, very high and very low allo-levels at either extreme. Although phonemic length exists in the language, phonetic length of any segment is varied constantly to interact with voice quality. Consequently, the hearer perceives alternation in a continuum of mood ~ attitude ~ intention. Terminals mostly fall in pitch, and speakers rely more on the pitch-level of significant lexical signals for interrogation, aspect or focus.

The plan followed is that generally favoured for technical studies, beginning with a statement of aims, followed by review of the field and pertinent literature, with a discussion of some tagmemic theories.



[1] A. Capell. Linguistic survey of Australia. Sydney: AIAS, 1963.

0.3 ACKNOWLEDGMENTS

I wish to thank Dr K.G.Hamilton, Darnell Professor of English, for his general supervision of my postgraduate work; the Australian Institute of Aboriginal Studies, for the grant which made this study possible, and also for bibliographical and general assistance; specifically, my supervisor, Mr E. H. Flint, for his invaluable guidance in, and assistance with this thesis; Miss M.C. Cunningham, for her computer programming: Dr A. Healey, for instruction in theoretical linguistics and descriptive techniques; and Rev. M. Martin, for his help in recording additional elicited materials; and the anonymous informants for their willing cooperation in the field.

I also desire to thank the Director of the Department of Aboriginal and Island Affairs, Mr P.J. Killoran; the Bishop of Carpentaria; and the officers in charge of the Edward River and Palm Island communities, for assistance in the organisation of field work.

December, 1968.

Allen H. Hall,
Brisbane.

C O N T E N T S

0.4 Symbolisation and citation

The phonetic symbols used in this thesis are those of K.L.Pike.[1] Minor modifications are listed.

[_]	means	apico-dentalisation
[=]	"	apico-inter-dentalisation
[′]	"	lamino-dentalisation
[>]	"	positional variation of a vocoid

Terminology is consistent with that used by Pike, Elson, Pickett, Longacre and other linguists who use the tagmemic model of description.

References and quotations are included as footnotes, the full details being given only initially and in the appended bibliography.[2]

Abbreviations used will first be explained. 'Vowels' will sometimes be reduced to V (and Vs), and 'consonants' to C (and Cs or C_1, C_2 ...). S will represent 'syllable' and in diagrams, p.o.a. will refer to 'point of articulation'.

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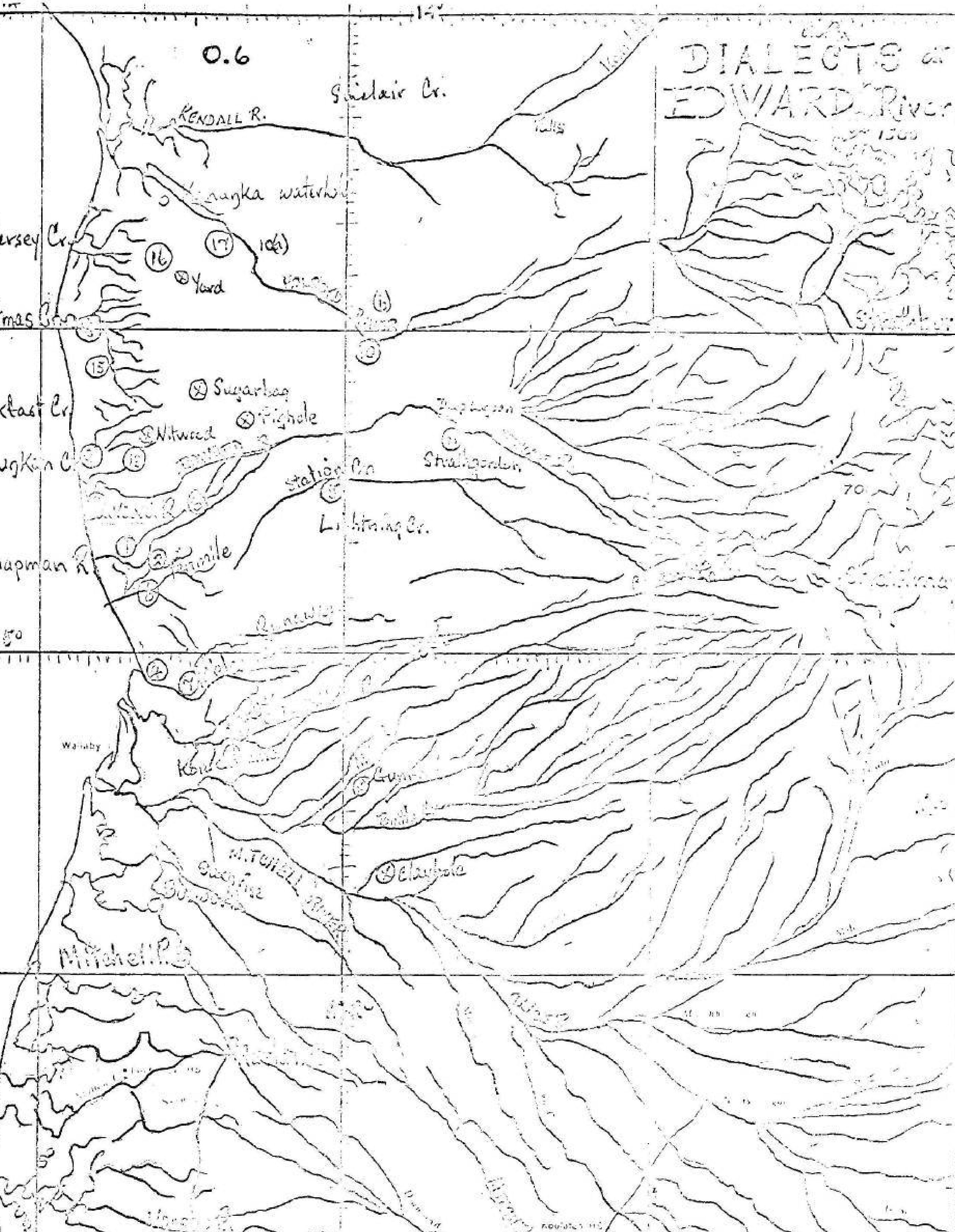
[1] Kenneth L. Pike. Phonemics - linguistics III. Ann Arbor: University of Michigan Press, 1947, 3-56.

[2] Both backward and forward references occur in this thesis, for cross-reference.

0.5 List of DIAGRAMS and CHARTS

...oooOooo...


O.6
DIALECTS at
EDWARD River
Sinclair Cr.
KENDALL R.
waterhole
ersey Cr.
Yard
Xmas Cr.
Sugarbag
Pighole
Nitwood
Strathgordon
Station Cr.
Lightning Cr.
hapman R.
Fourmile
Wallaby
Claypole
MITCHELL River
Mitchell R.
70
50

Sources

No extensive documentary sources have been available for the writing of the present thesis.

All references to the few pertinent incidental statements which have been found are indicated in the footnotes.

Theoretical indebtedness is acknowledged to the writers of the works referred to in footnotes and the bibliography.

A.H.Hall,

Research Scholar,

A. I. A. S.

1.1 A I M of the DEPTH-STUDY

The aim of this study is:

(a) To describe the phonology of Ta:yoɾ̃

(b) To describe the salient features of its grammar and lexis as a preliminary to a following depth-study

2.0 REVIEW OF PERTINENT LITERATURE

Reliable information about the Edward River culture is limited, for Ta:yoɽ has not hitherto been extensively described. Bibliographical research in libraries containing Aboriginal vernacular materials yielded no satisfactory results.[1]

2.1 Aboriginal vernacular studies

2.1.1 Capell, discussing sound systems of Australian languages, mentions the lack of sibilants, the devoicing of plosives, the retroflexion of certain consonants and the absence of fricatives (except in Cape York through Papuan influence).[2] The present study confirms this, but demonstrates that Ta:yoɽ vowels depart from the basic /i a u/ in having /e o/ as full phonemes. Deficient contrast in unstressed syllables makes the neutral [ə] subphonemic in status. The glottal stop has a minor role.

Capell outlines a connection between stress on the antepenultimate syllable and unless vowel length occurs on the penultimate of polysyllabic words.[3] (Thaayorr has morpheme-initial stress. 'Tone' is not lexical, but intonational patterns may exploit the semantic nuances of mood and intention.) He writes:

> "Tone is not generally of semantic value, but a few languages have elaborate tone-patterns."[4]

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[1] The Mitchell Library in Sydney, the Libraries of the Australian Institute of Aboriginal Studies in Canberra, and the University of Queensland, the Oxley Library in Brisbane, the Department of Aboriginal and Island Affairs, and the public libraries of Brisbane, Cairns, Rockhampton and Townsville.

[2] A. Capell. A new approach to Australian linguistics. Oceania Linguistics Monograph, No. 1. Sydney: University of Sydney, 1962, 5.

[3] Capell, op. cit. p. 8.

[4] Capell's notes are unobtainable.

2.1.2 Kenneth Hale, classifying north Paman languages, discusses three relevant points: [1]

(i) Referring to the 28 coordinate phylic families in this continent, he quotes Dyen's theory on racial origins,

"that diversity has developed where ... found,"

and agrees that for Cape York languages this is simpler than

"one which assumes separate migrations of distantly related languages into some area to explain diversity ... there."

Inferring a northern centre of dispersal, he queries whether original speakers came via Cape York or the Sahul Shelf.

(ii) Hale attempts reconstruction of Proto-Paman from lists in 13 modern languages sharing innovation in phonology and lexis. Their stems begin with consonants and end with vowels, being mainly two-syllabled and having medial clusters. [2]

(iii) These languages are un-Australian only in peculiar phonological developments like reduction of initial syllables (C- and CV-), aided perhaps by stress change from initial to second syllable. The short V_1, if not lost, was sometimes metathesized and long V_1 always shortened. Thus, novel phonemic distinctions developed: e.g. phonemic split. [3] Lamino-palatal consonants may condition back vowels. When the conditioning element is lost, its effect may remain on newly exposed segments which, if allophones, now contrast. [4]

Three of Hale's Paman 'developments' are relevant:
(a) A long V_1 caused lenition of C_2 forming a voiced fricative.
(b) With V-umlaut, initial laminal consonants fronted vowels.
(c) Loss of C_1 and sometimes V_1: (cf the word shapes in 5.1.6).

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[1] K. Hale. Classification of northern Paman languages, Cape York Peninsula, Australia. Oceanic Linguistics, 3, 2 (1964), 248.

[2] Resonant + nasal, lateral, flap or glide + stop. Nasal + stop are common. Final Cs are resonants (*n, *l, *r, *R and *y).

[3] Segmental conditioning by position/manner of articulation.

[4] Yinwum plain and prenasalised stops contrast.

2.1.3 Oates and Healey's survey list (with a multi-glot including Ta:yoř,) yielded no pertinent material.[1]

2.1.4 A search in the Mitchell Library, through many books containing references to Edward River, failed to produce anything of linguistic value. (Much material is uncatalogued.)

2.1.5 West refers to 'Dajor' taped materials among his references to sign-language, but none of his narratives has been obtainable. His tapes lack transcriptions.[2]

2.1.6 The practical orthography adopted in this thesis is that devised at the Linguistic Workshop of the Australian Institute of Aboriginal Studies, but with some modifications.[3] Many unresolved problems of a phonetic/phonemic nature make the chart of symbols "an interim compromise" for Australian vernaculars.[4] The selection was unsatisfactory because (i) Too many digraphs occur, (ii) Retroflex/palatal symbols are illogical.

2.1.7 M.C.Cunninghan found contrastive voice quality signals emotions or attitudes as contrastive phonological units.[5] Instruments like the sonagraph allow complete acoustic measurement, (replacing previously vague terms,) of individual and tribal patterns. The phonatory configuration of the larynx, the resonant setting of the chambers and articulators, comprise the gross oral posture of voice mechanism.

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[1] Oates and Healey. Manuscript No. 4222, deposited with the Australian Institute of Aboriginal Studies, Canberra.

[2] Lamont West. 1000-5000 eliciations (1960-2) with grammatical statement. Sign-language films in Dajor filed at Indiana: (200/12).

[3] See section 5.1.8.

[4] See appendix H.

[5] M.C.Cunningham. Voice quality. Unpublished paper to the Linguistic Society of Australia, Canberra, May, 1968.

2.2 Theoretical background

2.2.1 Pike argued that, in descriptive procedure, grammar and phonology cannot be rigidly separated.[1] Orderly field work concentrates upon first one and then the other.

(1) Pike analyses phonemes with reference to grammatical facts. It seems simpler to delineate structure when a mutual relation of grammar and phonology is assumed. Opposing the view that the assumption of grammar in phonological analysis causes circularity in reasoning, Pike found that much significant grammar can be deduced even from rough phonetic transcription. Such notes are adequate for grouping morphemes into major and minor classes, stems, affixes, words, phrases or layers.

(2) It is not possible to proceed far in the description of phonology before finding that more grammatical facts are relevant. Identification of morphemes, even initially, is necessary to phonemic analysis when minimal contrast occurs. Only minimal grammatical identification ensures accurate phonemic analysis. The investigator must know whether two items are different. This decision requires not merely lexical but grammatical information, for some morphemes have meaning only in context. Such require structural comparison, while some require isolation from their intonational characteristics, or at least, vary in connotation from utterance to utterance.

The linguist must know whether he has heard a slightly different word, or the same word varied phonetically. Variants may have the same meaning, for phonemes may deviate. Recognition of the same morpheme, heard with a phonetic difference, implies knowledge of the grammatical segmentation in the utterance. Pike seeks clues to the positional variation of phonemes by observing alternatives of a morpheme in different grammatical contexts: e.g. voiced/voiceless allophones.

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[1] K.L.Pike. Grammatical prerequisites to phonemic analysis. Word, 3,3 (1947), 155-72.

(3) In this, he differs from Hockett who requires stratification of the levels of description, divorcing grammatical facts from phonological analysis to avoid circularity.[1] Pike found even boundaries between words and phrases. He filled gaps later when grammatical work progresses (while phonology is still incomplete). Utterance-initial contrasts may suggest the beginning of a syllable or sequence. Variables and uncertainties may be eliminated even utterance-finally. Pressure from the grammatical on the phonetic sometimes occurs at the beginning of phonological units.

(4) Bloch and Trager group recurring partials for form and function, doing phonemic analysis first. Turning phonetic sounds into phonemic forms can be meaningful in grammatical structure.[2] Pike too, thinks allophones confuse grammar. He aims later at proving that the value of divorcing phonemic and grammatical levels of analysis has never been shown.[3]

Defining structure in its relation to interpenetrating layers, he deprecates analysis of phonemes, without reference to morphology and syntax. Neat compartmentalism may impede rigid description of emic structure. Pike thinks that Hockett (while defending the innate structure of a language), allows 'orthographic devices', rather than discovered units of structure (with its interpenetrating levels). It may be that Hockett, thus, can reject the idea of a fixed number of phonemes.

(5) More modern theory has tended to support Pike's view. Lamb describes levels as separate, but interrelated.[4]

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[1] C.F.Hockett. A system of describing phonology. Language, 18 (1942), 20 f.

[2] Bloch and Trager. Outline of linguistic analysis. Baltimore: Waverley Press Association, 1942, 53.

[3] K.L.Pike. More on grammatical prerequisites. Word, 8 (1952), 106-21.

[4] S.M. Lamb. Outline of stratificational grammar. Washington: Georgetown University Press, 1966, Section II.

(6) The present research supports Pike's view that mere phonetic transcription may expose grammatical factors. Approximate likeness enables many morphemes to be recognised and assembled into stems, affixes, compounds or phrases.[1] Meaning is allowed in parts of utterances as also for wholes. It is a necessity, not an expedient, for rapid analysis within phonology.[2]

The many microlinguistic problems encountered in a language which has never before been studied, demand meaning as a factor in their ultimate sorting. For emic contrast in Ta:-yoɾ̃, it is meaning which proved some sound variations in speech to be irrelevant.[3] Although phonology and grammar have gone hand in hand, yet this depth-study requires prior completion of the phonological analysis. A phonemic orthography does reveal structure more clearly, and elucidates word borders.

Contesting the charge of circularity, Pike reports that Bloch, Trager and Hockett have all implied that some grammatical analysis can be made with phonetic data.[4] Most phonetic transcriptions reveal grammatical facts, contrasts, resemblances and patterns. Thus, (partial) phonemicization of grammatical structure is helpful. Pike calls this progress spiral, not circular, building mature conclusions on earlier ones.

Some Thaayorr phonological facts (entwined with grammatical), revealed the interrelations of analytical levels.[5] Each was viewed in the light of the other.[6] Phonemic description of utterances required considerable knowledge of grammar.

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[1] See grammatical preview in 5.2.

[2] Especially in pairs of examples where distribution is partly alike and partly different.

[3] See sections 5.1.3.2 and 5.1.4.2.

[4] K.L.Pike. More on grammatical prerequisites. Word, 8 (1952), 106-21.

[5] See section 2.2.5.

[6] See section 5.2.4.

2.2.2 Optional or potential phenomena

Normal speech-flow does not always include every phonetic feature, just as some grammatical signals may optionally be omitted. Swadesh said all languages have their own peculiar structure which may explain various phonological limitations:[1] e.g. when potential pauses do not always occur between contours.[2]

Lexical stress sometimes disappears in Thaayorr speech. When a word in focus at the beginning of a sentence is heavily stressed, following stresses are reduced accordingly.[3] In the transcription of fast speech, the writing of the space between words would not depend on its being actually heard. In slow speech, all extra acoustic features could never be included except in phonetic script.

Edward River speakers often telescope strings of words by eliding word-initial consonants. This does not prevent successive accents from being maintained to preserve the rhythmic pattern of the long compound.[4]

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1 M. Swadesh. The phonemic principle. Language, 10 (1934), 122.

2 See section 5.1.7.3.

3 See section 5.1.7.4.

4 See sections 5.1.3.4 (iii) and 5.2.1.

2.2.3 Phonological analysis based on sound spectrograms

Han describes the phonology of standard colloquial Japanese after analysing speech samples mechanically.[1] Her results confirm several facts treated in 5.1.7.5:

(a) Two sounds in contrast have emic function, and, when not so, they are in etic function.

(b) Fundamental frequency values cannot form a basis for the linguistic comparison of pitch changes in speech segments, since perceived pitch does not vary directly with frequency.

(c) A special technique only can produce reliable results when speech samples contain minimal differences.

(d) As pitch may be the distinctive feature in Japanese, and other features redundant, so for another language one of the phonological features may be of primary distinction.

(e) Phonemic length affects 8 Japanese consonants. Thus, contrast between n and n: is not in quality, but length.[2]

2.2.4 The phonological word

The search for 'words' in a partly known language, discloses junctures of various types. In Ta:yoř, these are viewed as sub-phonemic joints between phonological units or connections between grammatical units having sporadic phonological character. Hockett thought junctural phones merely defined phonological segments having grammatical significance.

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[1] M.S. Han. Japanese phonology: an analysis based upon sound spectrograms. Ph. D. thesis, Texas: University Microfilms, Inc., 1961, 1-113 (-133).

[2] In Thaayorr, the contrast is phonemic only for vowels.

Some writers may list them as phonemes, but Pike queries whether juncture resembles either segmental or prosodic phonemes, and whether it has allophones or is a phonetical zero. In this analysis of Ta:yoř, a space does not have to represent some missing phonological evidence between morphological units.

In tape transcription, a pause may sometimes mark a word boundary and sometimes not. Has that pause phonetic value? Tagmemicists do not justify morphological transcription when insisting on merely phonemic transcription: e.g. Pike mentions the instance of Trager's allowing word division by morphological criteria when phonemic description is poor.[1]

Harris states that junctures, whether phonemic or environmental, assist linear succession.[2] They divide the speech stream into morphemes and words.[3] Pike deprecates such inconsistency in writers who reject grammatical criteria, while missing underlying phonetic clues to establish junctural phonemics.

This thesis attempts to solve the multiplicity of phonetic data without writing juncture. Though juncture is surely a part of grammatical structure, a grammatical approach to phonemics gives a simpler explanation of all the facts. So Pike considers that certain grammatical units in some languages have a feature of sub-phonemic modification of some sounds which, at borders of units, show phonological juncture. Thaayorr confirms that their absence does not affect the grammatical boundary.

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[1] K.L. Pike. Grammatical prerequisites to phonemic analysis, 1947.

[2] Z.S. Harris. The phonologies of African languages: the phonemes of Moroccan Arabic. J.A.O.S., 62 (1942), 318.

[3] He recognized juncture in outlining tone/stress sequences of Kingwana-Swahili.

2.2.5 The nature of the syllable

Two of Pike's premises are relevant for Ta:yoɾ̃:[1]

(i) If division is pertinent to meaning, a space, or a hyphen, represents orthographically this division in conventional style.

(ii) The vowel or syllabic nucleus of complex syllables is point of reference to describe satellite consonants.

This study confirms that, in addition to the dichotomy of vowel/consonant, a complex nucleus of fused sequences, (V + V or V + C), may occur as units in their slot.[2] Ta:yoɾ̃ syllables are structural units which can express economically the combinatory latitudes of vowel and consonant, in varying basic shapes. As the minimal pattern of phoneme combination with a V-unit as nucleus, the syllable is preceded and/or followed by a C-unit, or permitted CC-combination.[3]

Many linguists, including Hjelmslev, have described two types of syllable, consonant and vowel. Pike spoke of the etic and emic syllable, but many linguists adopting this term, have left no definition. Jorgensen (1952) saw it as an utterance by itself, which informants can repeat. O'Connor, later, listed the syllable with vowel and consonant, as a 'sequence of sounds'.

Syllables are more real than phonemes, in the Edward River psychology. Recognition by the linguist stems from features like Stetson's 'chest-pulse' (due to a contraction of the intercostal muscles); the 'chin movement' of Manzerot, or the lungs actively expelling air with varying rhythms correlating with syllables.[4]

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[1] K.L. Pike. Phonemics, 1947, 62(b).

[2] As with English diphthongs [aᴵ]; syllabic + non-syllabic.

[3] Minimal patterns were studied; see section 5.1.5.

[4] C.F. Hockett. A course in modern linguistics. New York: Macmillan, 1958, 64.

2.2.6 Morphophonemic transcription

Morph sorting depended on Hockett's minimal criteria:[1]

(i) Overt contrast forbids any two morphs being allomorphs of the one morpheme. (ii) Allomorphs of the one morpheme must have the same meaning. (iii) A resultant morpheme comprising two or more allomorphs should fit logically into the language pattern: e.g. 'go' and 'went' belong to one verb.

Elson and Pickett set up morphophonemes (rather than pseudo-phonemes), since some morphemes have more than one phonemic shape. Hockett had already discussed alternant shapes:[2]

> "The fact of multiple representation of single morphemes gives rise to one aspect of morphophonemes..."

He investigated the shapes, relationships and potential, (functionally and semantically,) differentiating sporadic alternants as dialectal, contrasting or just semantically allied.

Lamb, preferring a stratificational approach, set up the morphon for his intermediate stratum of three pairs. He criticised the view that morphophonemic alternation [3]

> "had no structural significance, and instead, was merely a matter of alternate phonemic shapes of morphemes." [4]

Capell sees English plurals as phonemic/grammatical in function.[5] Contiguous sounds cause "replacements, losses and additions of phonemes in the morphology of a language." [6]

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[1] See 5.2; Ta:yoʔ requires morphophonemic description.

[2] C.F.Hockett. A course in modern linguistics, 1958, 271 f.

[3] S.M.Lamb. Outline of stratificational grammar, 1966, 29, 38.

[4] Structure is static relationship, expressible in phonemic form.

[5] i.e. morphophonemic; A.Capell. Beginning linguistics, 1966, 75.

[6] K.L. Pike. Phonemics, 1947, 242.

2.3 General background

2.3.1 Anthropological

Simmons, Graydon and Gajdusek described Edward River: [1]

> "Fifty miles north of the Mitchell River Mission, between Edward and Holroyd Rivers, most isolated ... Aboriginal settlement ... . Remnants of Yir-Yiront (Koko Manjoien), Koko Daiyuri ... Wik Mencherra and Wik Munken settled and the groups live together with the least tribal disorganisations of any ... .total population is about 250, all full-blooded, and of these, 50-100 live a hunting, food-gathering life in the bush ... . native languages are still preserved.
>
> "There was very little contact or intermarriage between Aurukun tribes centred round the mission and those to the south at Edward River ... . 50 blood groups were tested and the gene R_2 was found ... . the major influence is Melanesian ... . the admixture is not recent, ... also with New Guinea."

2.3.2 Historical

Edward River was one of three settlements managed by the Church of England, under the supervision of the Bishop of Carpentaria. Several clans were encouraged to draw together in one central situation by a Mr Joseph Chapman in the year 1932. The Lockhart, Mitchell River and Edward River Mission stations were taken over by Government managers in May, 1967.

Capell delineates three natural groups of Aboriginal vernaculars, the Island, the mainland western, and the mainland

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[1] R.T.Simmons, J.J.Graydon and D.C.Gajdusek. A blood group genetical survey in Australian Aboriginal children of the Cape York Peninsula. American Journal of Physical Anthropology, N.S. 16 (1958), 59-77.

eastern, with a further subdivision into mainland northern and mainland southern. He assigned Ta:yoř to the latter southern grouping in the western segment.[1]

All informants use the name ['tɑ:yoř(ɛ)] for their language. Though in practical orthography this would probably be Thaayorr(e), for the present, but not exclusively, a phonemic spelling is used: /Ku:k Ta:yoř/.[2]

2.3.3 Phylic membership

Language families and sub-groups having their numbering and approximate positions encoded are listed in the respective areas of Capell's survey.[3] Number XXIX comprises the Pama-Nyungan family, and subgroup AC is the Pama-Maric Group:[4]

ACa	Mari	ACg	Middle Pama
ACb	Yara	* ACh	Western Pama
ACc	Atherton Pama	AD	Kalibamic group
ACd	Eastern Pama	AE	Tangkic group
ACe	Bay Pama	AF	Murngic
ACf	Northern Pama		

Ta:yoř is said to belong to ACh, Western Pama subgroup of the Pama-Nyungan language family, widespread in the far North.

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[1] A.Capell. A new approach to Australian linguistics, 1962, 10.

[2] Phonetically, the [ʊ] after [kʊ:kᵘ] is transitional, the [t̪] is dental in point of articulation, and the [r̃] is a trilled alveolar continuant. Final [-ɛ] is often heard, and is regarded as inflexional. At least, it is vestigial as dictated by the /pam/ versus /pama/ dialectal preferences.

[3] A. Capell. Linguistic survey of Australia. Sydney: AIAS, 1963.

[4] G.N.O'Grady, C.F. and F.M.Voegelin. Languages of the World. Indo-Pacific fascicule 6, Anthropological linguistics, 8, 2 (Feb., 1966), 1-197; appendix (K.Hale), 162-97.

3.0 DESIGN OF THE INVESTIGATION

3.1 Background information on the project

Independent suggestions led to the selection of Ta:yoř, one of more than 500 dialects listed in Capell's Survey, for depth-study. Since this language has not been well known to any worker, depth-study seemed imperative, to manifest its characteristics. This virile language is virtually a 'lingua franca' for nearly 300 inhabitants of the Edward River village.

Building an adequate corpus of materials required the planning of field trips, interspaced by analysis at Brisbane. A study of the principles employed in the science of linguistics facilitated the preparation of a pilot schedule. Its design has served to reveal the patterns of phonemes, morphemes and tagmemes comprising the speech and oral tradition of the gathered clans on their central mission station.

3.2 Field trips

Exhaustive methods have been followed to balance a dual corpus of elicited and taped data.[1] A wide range was necessary to reveal phonology, grammar and lexicon, so that the door might be opened to a culture and a mythology of which our knowledge is deficient. Collation of materials manifested the blending process whereby closely mixed groups cohere. They cling to their mythology, totem stories and music, but the social structure weakens. Basic concepts of life and kinship pervade the songs, dances and drama of what folklore still remains.

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[1] I 14 March to 19 April, 1966 allowing 1 month at Edward River.
II 30 June to 21 July, 1966; Pantha Coleman came to Brisbane.
III 12 to 27 August, 1966; two-week safari; Cairns to Mitchell.
IV 14 November to 3 December, 1966; 3 weeks at Palm Island.
V Ten weeks at S.I.L. Workshop, with L. Foot in Brisbane.
VI August, 1967; 2 weeks in Cairns with Edna, Clem and Polly.
VII November, 1967; 2½ weeks at Edward River and Cairns.

4.0 DATA AND ANALYSIS TECHNIQUES

4.1 Field work techniques

Problems of transcription occupied Pike's attention.[1] Some helpful maxims aided in transcribing Ta:yoř, initially:

(a) The linguist will take down his data with the inclusion of as many phonetic features as possible.

(b) He will listen for junctures, whether phonetically obvious or not, with the intention of identifying them as phonological or grammatical.

(c) The linguist will include in his analysis a study of grammar and phonology together, allowing each to aid the other.

(d) He will define phonemes in terms of symbolised grammatical borders like a space or hyphen.

(e) Symbols for grammatical borders should be used only for junctures defining subphonemic variation; or perhaps for important non-phonetic potentials such as the 'free' form.

(f) When a juncture has been once symbolized, it should be consistently symbolised, even when phonetically absent.

(g) The linguist will avoid specific grammatical categories; a non-verb difference cannot be the basis for defining the environments of allophones, (unless it covered all cases).

(h) Complete analysis requires every phonetic detail to be explained, all phonemes symbolised and any variation solved.

Optional phonetic variations can be confusing. Ta:yõr medial consonants tend to be lengthened. Lack of contrast may prove the feature non-phonemic. The first syllable of morphemes is ordinarily stressed. But, in actual fact, the stress is sometimes barely detectable. Not so for length, (in initial syllables of morphemes), if this is a phonemic feature. Whether present or absent, it must be recorded in its lexical form.

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[1] K.L. Pike. Phonemics, 1947, 46.

4.2 Analysis of field materials

The data were carefully categorised and filed. Where possible, matrices and paradigms were employed to highlight the structure and indicate gaps in the data. The growing lexicon facilitated diagnosis of morphemes in the taped narratives.

Increasing technical skill helped phonemic analysis when an informant proved unable to elucidate some problem, though he knew his language so well.[1] Fine grammatical distinctions or phonetic variations may be equally inexplicable by the native speaker. The linguist, with his ear tuned for new words, has detected emerging patterns. By insight, he can discover the phonemic system and its allophonic variations.

Hockett's four fundamentals are, (i) contrast and complementation, whereby two similar sounds may be recognized as either allophones or separate phonemes, (ii) phonetic similarity of allophones, unless multiple complementation proves them members of different phonemes, (iii) neatness of pattern, when allophones differ for environmental reasons, and (iv) economy, so that the alphabet is concise in pattern congruity.

Robins's 'levels of analysis' in sorting data (for diverse features), require different criteria.[2] Phonetics and grammar are different levels to the linguist putting vocal noises on paper as marks to be read.

> "One must recognize at the outset and as the basis of any division of linguistic analysis ... into levels, the two aspects of all utterance, form and meaning."

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[1] C.F.Hockett. A course in modern linguistics, 1958, 102-11.

[2] R.H.Robins. General linguistics; an introductory survey. London: Longmans, 1964, 11 f.

4.3 Statistical analysis by computer

The present thesis includes a statistical frequency count, using six different programmes.[1] Vowel and consonant phonemes and all relevant sequences of phonemes were counted and recorded with their percentage of occurrence.

Passages of narrative text from 14 different speech utterances provided the phonological corpus which was punched onto computer cards. It covered a wide range, totalling 2,348 words. Although the corpus was a good cross-section of Ta:yoř speech, yet the limitations of any such restricted block of utterances became obvious as analysis proceeded. The passages chosen were from these narratives:

AA	Joseph Pita	'Oral letter to his wife (from prison)'
BB	Teddy Rogers	'Oral letter to his wife (from prison)'
CC	Joseph Pita	Tribal story, 'How we got the dog'
DD	Mabel Edwards	'To Melbourne by Sunlander and by plane'
EE	Lawrence Foot	'Oral letter to his wife from Brisbane'
FF	Lawrence Foot	'Sunlander trip from Brisbane to Cairns'
GG	Pantha Coleman	'Speech to the tribal elders at Edward River'
HH	William Charlie	'Harangue to the leaders of the tribes'
JJ	Vincent Coleman	'A Thaayorr story'
KK	Vincent Coleman	'Our Captain Cook story'
LL	Harry Charlie	'Trip to Cairns by Bush-pilot Cessna'
MM	Joseph Pita	'Bruce Ta:yoř's accident by shooting'
NN	Joseph Pita	'The wallaby story',

Hyphenation was used in the text to separate off any phonemes elided in normal speech-flow. No other punctuation was used in this series of programmes identified as A to F.[2]

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[1] M.C.Cunningham, University of Queensland, provided the programmes in Fortran which were 'run' on the GE 225 computer.

[2] Results are shown in relevant sections of 5.1.3 and 5.1.6.

Symbols for computerisation

Programme requirements required symbolisation of phonemes:[1]

Unchanged consonants		Random-coded consonants	
/p/ = p	(Table 2)	/t̲/ = d	
/t/ = t		/ty/ = j	
/k/ = k		/'/ = q	
/l/ = l		/r̃/ = b	
/r/ = r		/n̲/ = f	
/m/ = m		/ñ/ = s	
/n/ = n		/ŋ/ = ɛ	
/w/ = w			
/y/ = y			

Unchanged vowels		Random-coded vowels	
/a/ = a		/a:/ = h	
/e/ = e		/e:/ = v	
/i/ = i		/i:/ = x	
/o/ = o		/o:/ = c	
/u/ = u		/u:/ = z	

Peripheral considerations were considered on their merits:

(i) Pause slashes would not be included in the corpus.

(ii) Number of syllables would require to be counted as the number of syllables plus the hand-counted syllabic Cs.

(iii) Intonational contouring would be omitted.[2]

(iv) Grammatical information would be omitted this time.[3]

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[1] See 5.1.3.1 and 5.1.4.1 in this thesis.

[2] Figure symbols 1 - 4 may be suffixed at appropriate points after any punctuation symbol to indicate the pitch levels.

[3] Dr J.E.Grimes (Cornell University) wrote, "There is no problem with grammatical information...in the form of suffixes...".

4.4 Para-punch card analysis in sorting

Pence desdribes a technique for dealing with various materials by para-punch cards. He recommends the code 8-4-2-1 giving 15 categories, rather than 7-4-2-1, giving only 14.[1]

A programme card was drawn up for dealing with mixed phonological and syntactic information.[2] However, this was abandoned in favour of a separate set of cards for each type of investigation. The present phonology did not require cards.[3]

An arrangement of selected topics shows how various grammatical categories are retrievable when the corpus of phrases/clauses/sentences is typed on para-punch cards. Needling these according to figure coding selects any category.[4]

4.5 Types of material in the main corpus

The following types of material were sought so that a balanced corpus without obvious 'gaps' would facilitate study:

Elicited word-lists for lexical study
Elicited sentences illustrating grammatical structure
Elicited words of a special nature: e.g. adverbs
Taped stories of ancient tribal mythology
Taped narratives of adventures in recent years
Taped letters from informants to their dependents
Taped songs, ancient and modern
Taped lectures from elders to tribe
Taped accounts of journeys by various transport
Taped accounts of tribal activities and culture
Taped readings of elicited sentence materials.[5]

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[1] A. Pence, Punched card filing for linguists. Oceania Linguistic Monograph 6, (1962), 76-89.

[2] On a pattern supplied by W.H.Douglas, University of Perth, 1965.

[3] The syntactic set of cards may be employed during later study.

[4] See Appeneix E.

[5] See Appendix G.

4.6 Apparatus used for phonological measurement

The IDFF (Intensity-Duration-Frequency of Fundamental Analyser) is an apparatus providing a synchronised acoustic display of the intensity, duration and frequency features of an utterance. Flint has already given a full description of this machine.[1] It enabled the linguist to objectify, examine and assess every acoustic feature except formant bands of controlled speech.

One hundred samples of speech gave a wide range of utterance phenomena for study by mechanical means.[2] The IDFF was used to photograph the acoustic display of each utterance after strict preliminary auditory correlation of the speech material. Projection of film strips on to a visio-screen facilitated accurate measurement of all features investigated.[3] Eleven analyses follow (5.1.7.5) in order to show what purpose may be served by the study of Thaayorr phonological patterning in speech.[4]

The following are the steps taken in the analysis of each sample: (1) Recording the samples in phonemic script (2) Making an English translation of them (3) Observing relative auditory prominence of phonemes, including that of transitional vowels (4) Measurement of frequency, intensity, and duration of phones (5) Calculation of pitch changes in semitones (6) Observation of the pitch range of each utterance in semitones (7) Observation of loudness range (8) Calculation of average phone duration (9) Summary of comments on auditory prominence.

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[1] E.H.Flint. The differentiation of homonyms in communicative Japanese utterances. Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung, 20, 3 (1967), 223-5.

[2] Sections 5.1.7.5 and 5.1.7.6 of this volume.

[3] The projected image was regulated to a span of 10" wide, representing 2.8 seconds of tape-loop duration.

[4] All utterances occur in the tapes now transcribed in a volume of oral tradition which will be the object of a later syntactic analysis.

4.7 Supplementary premises in procedure

1. Phonetic procedure

If two or more strictures co-occur in one segment, criteria are needed to determine their relative rank. With regard to cavity, the oral is primary, the nasal secondary and the pharyngeal tertiary. Strictural function may be articulatory, valvate, modifying (like voicing) or initiating, in that order. Degree of stricture is closure, friction or frictionless.

E.V.Pike found high correlation between phoneme groups and traditional phonetic charts.[1] Within a phone, primary stricture outranks secondary, which outranks tertiary. So does closure outrank friction as friction does cavity friction. Between phones, high ranking stricture outranks the less. But when two phones have the same acme or high rank, they are separated on the next highest stricture of each one.[2]

In complex phonemes, segmental strictures rank as simultaneous so that /^{V}c/ outranks /t/, /s^{W}/ outranks /s/ and /'b/ does /b/. High outranks low pitch. Initiators virtually having additional stricture, /t$^{<}$/ outranks /t'/ which outranks /t/.

Consonant phonemes of Ta:yoř could therefore rank as:

j, w, p, t, ř, l, t, r, y, k / ñ, m, n, n, ŋ /'.

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[1] Eunice V. Pike. Phonetic rank and subordination in consonant patterning and historical change. Reprint from Miscellanea Phonetica, 2 (1954), 25-41.

[2] Just as /b/ outranks /p/, /p/ does /m/ or back vowels do front. Orally, the more front [ɓ] outranks [ɗ] as also /t/ does /k/.

2. Phonemic procedure

Two sub-premises of Pike are relevant: [1]

(a) A phonemic orthography based on universal characteristics allows one accurate analysis of a set of data.

(b) Juncture borders are not necessarily significant, but stress, pitch and length may interact with sound segments which mutually modify each other's environments.

4.8 Allophonic procedures followed

Studying allophones, Pike explains additional basic premises.[2] Five assisted in the present description: [3]

(i) Predictable elements are not phonemic. Literate vernacular readers, unconsciously following 'mental rules', adjust their pronunciation of the symbolized phonemic text. The written norm of a phoneme is that submember least limited in distribution, for the immediate environment conditions allophones.[4]

(ii) These submembers are phonetically similar, and mutually exclusive in their environments. Every phonetic segment is a phoneme if not a part of some more inclusive phonemic unit, or a mere environmental modification of a phoneme.

(iii) When there are two feasible phonemic conclusions, the simpler is preferable, especially if it analyses suspicious data on a parallel with analogous non-suspicious data.

(iv) When two segments are proved phonemically distinct, they remain so, even when there is fluctuation between them.

(v) These are proved phonemically distinct when they are the minimal difference between two words of different meaning.

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[1] K.L.Pike. Phonemics, 1947, 61(b).

[2] op. cit. 62.

[3] Sections 5.1.3.3 and 5.1.4.3.

[4] Aboriginal informants can be taught more easily to distinguish phonemes than allophonic submembers of phonemes.

4.9 Interpretation

Characteristic sequences of sounds are diagnosed as consonants and vowels, (which do not coincide exactly from language to language). Pike describes this dichotomy between vowel and consonant as partly distributional, partly articulatory. Some segments are non-significant and merely transitional.[1] This study adopted four criteria in interpretation:

(i) It identified non-suspect CV-patterns and noted the suspect segments which might fill either nucleus or margin of syllables. Pattern pressure enabled suspicious sequences to be symbolised after interpretation, since vocoids mostly fill nucleus slots and contoids margin slots of syllables.

(ii) Phones at the bottom of the consonant chart and the top of the vowel chart were considered suspicious, being phonetically similar. When such a suspicious segment filled a slot where known consonants occur, it was interpreted as a consonant, and likewise for vowels. Sometimes, a suspicious segment occurred in both slots. Thus, when /i/ occurred in a V-slot, it was called /i/, and in a C-slot, /y/. So too for /u/, /w/.[2]

(iii) But some clusters of sounds fill phoneme slots, yet their segmental number is different in phonetic clusters; this would include the segment [ə] and the transitional vowels, as well as some initial consonants which undergo elision (loss).

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[1] The ultimate criterion: e.g. with centralised vowels in unaccented syllables, is contrast; lining up the sound with relevant phonemes until a native informant identifies a difference.

[2] See the footnote to Elision in 5.1.3.4 on page 72.

5.0 R E S U L T S of the study

Three interrelated divisions have issued from the field data of elicited and taped raw speech materials. A complete description of the phonological hierarchy of Thaayorr precedes an outline of its grammatical and lexical hierarchies.[1]

5.1 THE P H O N O L O G Y OF THAAYORR

5.1.0 Pike's four premises assisted in weighing evidence prior to phonemic decision.[2] Ta:yoř shows conditioned variation of a consistent nature when sounds are altered from basic types by their environment. These sounds are not always treated as allophones, but as conditioned 'distortions' of norms.

Stops, nasals and fricatives form three series of contoids within the sound-system of Ta:yoř. Symmetry of articulation at similar points in the mouth enables one to predict the existence of an expected phoneme in one of the groups if it had not been recorded. Subsequent diagrams reveal the congruity of the phonemes which were established after the search for 'missing', but anticipated sounds.

Edward River speakers do not repeat the same sounds identically as they are reproduced on electronic tape. Though basically recognisable as the same, it differs acoustically. Minute variations in breath, articulation, stopping, nasal and oral conditions of health and attitude affect this.

Some sounds seem to be transformed by their environment: e.g. /i/ and /u/ are vocoid or contoid (/y/ and /w/), only after a consideration of univalent cases.[3]

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[1] See sections 5.2, 5.3 and 5.4.

[2] K.L.Pike. Phonemics, 1947, 57-60.

[3] See section 4.9.

5.1.1 The phonemic approach

Descriptive procedures utilising the principles of contrast, variation and distribution are very suitable for the phonemic description of Thaayorr. Significant sounds possessed audible variations within the limits of each specific phoneme. Orderly patterns suggested that allophones were scattered through syllables and words in a manner which was not random.

Different points of articulation caused most of the differences between phonemes. But other features, e.g. aspiration, voicing or fricativisation, modified the types of sound. Position of occurrence, (word-finally, intervocalically or word-initially,) conditioned some of the variation. On the other hand, it may be a free variation, as when stops are released or unreleased according to mood. Both aspiration and release are important phenomena in the language.[1]

An adequate alphabet has been established after the valid minimal units of the sound structure were isolated. Symbolisation of these phonemes led to the confirmation of a minimal alphabet of 26 letters. To symbolise all variations would require a large alphabet which could not be read fluently by native informants.[2] Too many non-significant sounds would confuse the reader, who is mentally conscious normally of the minimal units only.

Distribution of the phonemes is in emic patterns, which this thesis describes after comparing words composed of such minimal entities.[3]

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[1] See section 5.1.3.3.

[2] e.g. /h/ occurs in only one word ['hɑ:] 'there now!'; this is better classed as a heavily aspirated vocoid.

[3] See sections 5.1.3.4, 5.1.3.5; 5.1.4.4 and 5.1.4.5.

5.1.2 The phonetic sounds of the language

Many 'etic' sounds are clearly audible in Ta:yoɾ̃ speech utterances. Articulation of stops, for example, occurs at most points within the oral cavity. Aspiration, voicing and friction, modify them as shown on the phonetic work-chart following. These points of articulation are in bilabial, (inter)dental, alveolar, palatal, retroflexed and velar regions. The glottal stop occurs in few words, but some are very common.[1]

Nasals too, occur in every possible point of articulation, parallel to the stops, but in the nasal cavity. Interrelation of nasal and oral cavities occurs in the nasal release of the stop /p/, before /m/, in ['tanpm] 'kicked'. Within the oral cavity, the diverse articulation manifests both vocoid and contoid effects. These are impressionistic or acoustic rather than articulatory. Ta:yoɾ̃ vocoids have their typical resonance but contoids possess audible turbulence: e.g. when the egressive air-stream is stopped or hindered at various points of articulation or redirected into the nasal cavity.

Every part of the speech tract (lungs, larynx, pharynx, velic and so on), has a part in channelling the voice within the range of sounds produced by the organs of speech. The semivowels comprise a bilabial /w/ and a palatal /y/ together with the retroflexed continuant /r/. Two more contoids, the apico-alveolar trilled /r̃/ and liquid /l/, complete the set. Non-release of stops is common, especially in certain parts of words Just as many varieties of the above sounds are heard by a linguist sensitive to phonetic variation, so vocoids include many deviations of the five basic qualities of [ɪ], [ɛ], [a], [o] and [ʊ]. These cause minor 'fronting and backing' in contoids.

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[1] See section 5.1.3.2 (a).

(a) Phonetic work chart of contoids

The following arrangement of the phonetic contoids of Ta:yoř systematizes most of the sounds according to their point of articulation and degree of stricture.[1]

(Table 3)	Bilabial	Apico-interdental	Apico-dental	Apico-alveolar	Apico-domal (retr)	Lamino-palatal affric.	Dorso-velar	Glottal
Stops aspirated	p^h	$\underline{\underline{t}}^h$	$\underline{t}^h$	t^h	$\dot{t}^h$	$ty^{h\,2}$	k^h	
unaspirated	p	$\underline{\underline{t}}$	$\underline{t}$	t	$\dot{t}$	ty	k	ʔ
Fricative voiced	ƀ	$\underline{\underline{đ}}$	$\underline{đ}$	đ	$(\dot{đ})$	$(\widehat{dy})$	ɠ	
Nasals	m	$\underline{\underline{n}}$	$\underline{n}$	n	$\acute{n}$ $\dot{n}$	ñ	ŋ	
Lateral				l	$(\dot{l})$			
Trilled vibrant				r̃				
Glides - semi-vowel	w				$\dot{r}$	y		

[1] These phones 'combine' into emic phonemes, each of which is able to effect contrast in lexical meaning, and is classed as 'different' to the indigenous speaker of Ta:yoř.

[2] This sound is an apico-lower-dental, lamino-alveo-palatal affricate which varies from voiceless to voiced.

(b) Phonetic work chart of vocoids

The following vocoids comprise the range which Ta:yoř speakers use. They are classified by means of the posture of the tongue, the jaw and the lips.[1]

		Front		Central		Back	
		Unrounded	Rounded	Unrounded	Rounded	Unrounded	Rounded
H.	Close						
	Open	I $I^{>}$					$\cup^{<}$ $\cup$
M.	Close	e $e^{\backsim}$		ə			$o^{<}$ o
	Open	ɛ $\varepsilon^{>}$		ʌ			$\mathrm{ɔ}^{<}_{\Lambda}$ $\mathrm{ɔ}^{\Lambda}$
L.	Close	æ		Λ^{v}			ɔ
	Open			ɑ			ɒ

(Table 4)

[1] Later description will show how these isolated phones are the raw materials the linguist groups into emic 'phon-emes' as demonstrated in section 5.1.4.2 and 5.1.4.3.

5.1.3 C O N S O N A N T S

Comparison of consonant phonemes demonstrates Hockett's division of phonemes into two basic classes, 'obstruants' (stops, affricates and spirants), and 'sonorants' (nasals, liquids and glide vocoids like English semivowels).[1] Glottal (or pharyngeal) consonants are outside this division. Obstruents are neatly patterned in position/manner of articulation, while sonorants can be 'random left-overs'. Although such division is only partly applicable to Aboriginal phoneme inventories, grouping of /Ta:yoɾ̃/ contoids employs some of Hockett's terms.

5.1.3.1 Consonant Phonemes

Sixteen consonant phonemes were verified. The stops are /p/, /t̲/, /t/, /k/ and /'/. An alveo-palatal dental affricate /ty/ also occurs. Five nasals have been established, /m/, /n̲/, /n/, /ñ/ and /ŋ/. Others are the lateral /l/, the trilled vibrant /ɾ̃/, the retroflexed continuant /r/ and two semi-vowels /w/ and /y/.[2] The following charts show (a) contrastive features, (b) an alternative contrast and (c) the phonetic description of allophones.

(a) Contrastive feature chart - consonants

Point of articulation	Bilabial	Dental	Alveolar	Palatal	Velar	Gl
Obstruents - stops	p	t̲	t	ty	k	?
Sonorants - nasals	m	n̲	n	ñ	ŋ	
	Front		Central	B a c k		
Semivowels - glides	w		r	y		
Continuants - trilled vi rant			ɾ̃	(Table 5)		
- (lateral) liquid			l			

[1] C.F.Hockett. A course in modern linguistics, 1958, 97.

[2] Suggested by the affinity of [-ər] ~ |-V-r|, /-i-y/ and /-u-w/.

Alternative ordering of contrastive features

In Ta:yoř, an affinity exists between /p/ and /w/. These two phonemes fluctuate in morphs like /wal/ ~ /pal/. Although /w/ purports to be bilabial by the obtrusive lip-posture, the tongue-back is actively poised in a velar position.[1] Consonant phonemes show contrastive design in the following 'first inversion' of traditional displays.[2]

(b) Contrastive features of consonants

Dental	Alveolar	Palatal	Velar	Bilabial	Glottal
t̲	t	ty	k	p	ʔ
n̲	n	ñ	ŋ	m	
r		y	w		(Table 6)

All three lower phonemes function as semivowels. Further, when a final /-i/ is pronounced, a glide [y] is often perceptible as coda. So too, with a final /-u/, a glide /-w/ frequently terminates the vocoid: e.g. an English (sandhi) [r] often functions like a 'buffer' between words. This analogy merely serves to explain how the Thaayorr /-r/, whether preceded by a nuclear vowel or not, reveals a glide character having dual function.

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1 M.C. Cunningham, in an unpublished paper, mentioned the affinity in some languages between bilabial /w/ and velar /k/, perhaps because of the semivocalic (twin) feature of the back vowel /u/ in different kinds of slot.

2 The new arrangement of points of articulation is: Alveolar (alveolar and/or alveo-retroflexed), Palatal (central), and Peripheral (velar and bilabial), where one assumes that what the tongue-tip does frontally, the back does velar-wise.

(c) Phonetic description of contoids

(Table 7)

Phone	Phonetic description	Phoneme
[p^h]	Voiceless bilabial aspirated stop	/p/
[p]	" " unaspirated "	
[ɸ]	Voiced bilabial fricative	
[$\underline{\underline{t}}^h$]	Voiceless apico-interdental aspirated stop	/t/
[$\underline{\underline{t}}$]	" " unaspirated "	
[$\underline{\underline{ð}}$]	Voiced " fricative	
[$\underline{t}^h$]	Voiceless apico-dental aspirated stop	
[$\underline{t}$]	" " unaspirated "	
[$\underline{ð}$]	Voiced " fricative	
[t^h]	Voiceless apico-alveolar aspirated stop	/t/
[t]	" " unaspirated "	
[ð]	Voiced " fricative	
[$\dot{t}^h$]	Voiceless apico-retroflexed aspirated stop	
[$\dot{t}$]	" " unaspirated "	
[$\dot{ð}$]	Voiced " fricative	
[ty^h]	Voiceless apico-lower-dental lamino-palatal affricate	/j/
[ty]	" " " lamino-palatal affricate	
[dy]	Voiced apico-lower-dental lamino-palatal affricate	
[k^h]	Voiceless aspirated velar stop	/k/
[k]	" unaspirated " "	
[ɣ]	Voiced velar fricative	
[ʔ]	Voiceless unaspirated glottal stop	/'/

(c) continued

Phone	Phonetic description	Phoneme
[l]	Voiced apico-alveolar lateral	/l/
[r̃] [R̃]	Voiced apico-alveolar trilled vibrant Voiceless " " "	/r̃/
[ɾ]	Voiced apico-retroflexed continuant	/r/
[m]	Voiced bilabial nasal	/m/
[n̪] [n̪]	Voiced apico-inter-dental nasal " apico-dental nasal	/n̪/
[ɳ] [n]	Voiced apico-retroflexed nasal " apico-alveolar nasal	/n/
[n̈] [ñ]	Voiced apico-dental lamino-alveolar nasal " " lamino-palatal "	/ñ/
[ŋ]	Voiced velar nasal	/ŋ/
([v][1] [w]	Voiced bilabial fricative) " " semi-vocoid	/w/
[y]	Voiced lamino-palatal unaspirated semi-vocoid	/y/

All the above phones are produced with egressive lung-air. They represent the principal allophones in T̲a:yoɾ̃.

[1] The phone [v] is really [ɓ] by observation and by interpretation, on tne basis of univalent cases of the other stops. See section 5.1.3.3 for the description.

5.1.3.2 Consonant Contrasts

Ta:yoř sounds comprise 'functional entities' whose likeness of feature distinguishes the phonemes. Informants seemed intuitively to depend on a difference in meaning when choosing one or the other of two sounds in some identical environment. But distribution was complementary when two sounds did not occur in any of the same phonetic environments.

Two such sounds in free variation were recognized as the same phoneme. When in contrastive distribution, they are allophones of different phonemes.[1] Pike's criterion of phonetic similarity served to resolve some issues. Congruity with the general phonemic pattern clarified a few cases.[2] Contrast was crucial whether minimal or analogous.

The following Thaayorr lists illustrate Twaddell's method of distinguishing words by a unity of pertinent sound now linked with the phoneme.[3] A mental reality, imagined by the hearer, in spite of acoustic and articulatory variations, permits phonetic assessment of the varieties of a multi-sound unit.

Ta:yoř listeners hear sounds as same/different. This thesis groups phonetic events into classes. In such classes, the macrophoneme is an abstractional fiction (cf. the reality of the microphonemes). Consonant phonemes (5.1.3.1 and 5.1.4.1) keep words apart. Their relationship is:

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[1] Two sounds in complementary distribution are allophones of either the same phoneme or different phonemes.

[2] K.L.Pike. Phonemics, 1947, 57-60.

[3] W.F.Twaddell. On defining the phoneme. Language Monograph, 16 (1935). Reprinted in Readings in linguistics, 55-80.

(a) Stops

Front stops contrast, so that alveolar /t/, dental /t̪/ and the alveopalatal affricate /j/ are considered to be separate phonemes.

Word-initially

/tak/ 'with a stick'	/t̪ak/ 'leave it'	/jat (ke'e-r̃)/ 'speared'
/tep/ 'be quiet'	/t̪e:p/ 'excrete'	/je:r̃/ 'sorry'
/tok/ 'hit with stick'	/t̪o:mp/ 'smoke'	/jol/ 'paddle'
/tu:r/ 'gunshot sound'	/t̪u:r/ 'marrow'	/jur/ 'swim river'
/tuk/ 'spear sound'	/t̪uk/ 'block spear'	/juk/ 'sugar'
/tup/ 'speared'	/t̪uř/ 'jump'	/juř/ 'spear-twang'

Inter-vocalic

/ŋotonje/ 'mountain'	/ŋot̪on/ 'son'	/wo:joř̃um/ 'story'
/pa:tar/ 'flower'	/pa:t̪ař̃/ 'bit'	/t̪a:jam/ 'bark shack'
/wati/ 'for bark'	/wa:t̪iř̃/ 'searched'	/wajiř̃ 'look out'
/kuta/ 'dog'	/(min) kut̪al/ 'fish-hawk'	/t̪ujan/ 'in bush'

Word-finally

/mut/ 'back'	/mut̪/ 'nape (neck)'	/muj/ 'refuse'
/rat/ 'book'	/rat̪/ 'saved, chop'	/paj/ 'rise'
/t̪a:t/ 'side'	/t̪a:t̪/ 'sinew'	/pa:j/ 'shout'
/t̪a:w-put/ 'jaw'	/put̪/ 'yam dish'	/t̪uj/ 'scrub'
/mit/ 'work'	/mit̪/ 'bubble'	/t̪anij/ 'go stand!'

The glottal stop

Analogous contrast is obtainable. A few words show that the contrast may sometimes reflect a lost intervocalic stop as well as being phonemic. The glottal stop has been set up as a phoneme on the basis of the following examples, but the functional load is rather light.

ru:r̃ ma'ar 'trap-door spider'	mat-ar̃ 'bothered, pestered'
wa'ap yal 'little creek'	watap 'river' (Ku:k Yak dialect)
wa'ar 'jelly-fish'[1]	min wa:tar 'rock wallaby'
in' 'this'	in-t 'this was it!'
par̃'r 'boy'	pa:r̃-r 'thundered'
ko'or̃ 'killed'	ko:r̃ 'behind, beyond, outside'
ke'er̃ 'speared'	kejer̃ 'fresh (water)'
i'i 'here'	i: 'there'
mi'ir̃ 'picked up'	miri 'red sunset'
ko'o-nij 'go spear him!'	konij 'cold in the nose'
pu'am 'wounded'	pu:kam 'new, young'

The amount of glottal stricture in the glottal stop varies. Sometimes phonetically absent, it always appears again on slow repetition. The glottal stop often divides identical vowels.[2] Further study is needed in the realm of dialectal comparison, in order to work out a valid theory of the occurrence of this phoneme. Some words containing it; e.g. the demonstrative, /in'n/ 'this' ~ /ŋaw-in'n/, are very common.

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[1] Compare /wa'i/ 'jelly-fish' in Ku:k Maŋka dialect.

[2] The tendency towards vowel-harmony may contribute to this.

(b) Nasals

In monosyllables, a measure of contrast separates the nasal consonant phonemes:

Word-initially

/me/ 'oh dear'	/ŋe/ 'what's that?'			
/moŋ/ 'many'	/noŋ/ 'move'	/ñoř/ 'throat tickle'	/ŋok/ 'water'	
/mak/ 'scab'	/nak/ 'look'	/ŋak/ 'let (me)'		
/mul/ 'tail'	/nul/ 'he'	/ŋul/ 'later';		

Word-finally

/kum/ 'missed you'	/pu:n/ 'hornet'	/pu:n/ 'wind'	/mo:ŋ/ 'very many'		
/kam/ 'blood'	/pan/ 'bait'	/wan/ 'growl'	/waŋ/ 'white-man'		
/rum/ 'band'	/ton/ 'bark-canoe'	/ni:n/ 'sit'	/no:ŋ/ 'moving'.		

/n/ fails to occur word-initially and /ñ/ does not occur word-finally in monosyllables. In CVCC monosyllables, both fail to appear word-initially. Contrast is analogous in the C_2 slot:

mamp 'Placenta'	min-t 'bird..you'	ŋanp 'cross-legs'	niñj 'truly'	moŋ-t 'It was many'
kumn 'thigh'	yun-ṉ 'what's it?'	tanp 'kick'	puñj 'stay'	yaŋn '(head)-hair'
rum-t '(head)band'	pan-t 'bait!'	min-t 'It's good'	puñj 'stay'	nuŋn 'dry'
kamn 'grannie'	kant 'cut open'	kunk 'alive'	kuñj 'penis'	ka:ŋk 'grape'
kumr 'stride past'	ŋan-p 'Me again'	munk 'Patch of bush'	ŋañj 'scret'	maŋr 'few'
kam-t 'the blood'	ŋan-t 'it's me'	man-t 'the chest'	wiñe-t 'the prawn'	pu:ŋ-t 'the sun'
neman-p 'from here'	ŋanin 'Daddy'	manum 'really'	ŋañiř 'baby'	naŋ-un 'to him'
pam-t 'the man'	pu:n-t 'honey..you'	punj 'hunk'	puñj 'stay'	puŋk 'knee'
mimp 'blanket'	to:n-p 'the canoe'	tink 'beeswax'	meñj 'spring'	tiŋk 'wild-cat'.

In CVCCC monosyllables, contrast is limited, and the nasals are conditioned by contiguous homorganic stops in C_3:

/tirmp/ 'salmon'	/tirnt/ 'beefwood tree'	/perŋk/ 'rifle fish'
/termp/ 'salty'	/pelnt/ 'they!'	/nerŋk/ 'son'.

Limited contrast has occurred in CVCV words, the examples for /ñ/ being deficient initially and medially:

/pu:mi/ 'brother'	/mina/ 'hunting'	/tono/ 'one'
/muka/ 'nephew'	/naka/ 'here'	/ŋali/ 'we-2 exc'.

Initially, in CVCVC words, bilabial/dental/velar nasals contrast:

/maŋir/ 'several'	/naŋ-n/ 'his'	/ŋanin/ 'daddy'
/menom/ 'firefly'	/nemin/ 'from here'	/ŋe:ŋem/ 'listening'
/mular/ 'yams'	/nulur/ 'only he'	/ŋular/ 'quick!'
/muñur/ 'cookaburra'	/nuñur/ 'only you'	/ŋutur/ 'navel'

Medially, contrast is better, (except for /ñ/; it occurs only once). The five nasals occur intervocalically:

/kemet/ 'grandson'	/yeneñ/ 'open it'	/wenet/ 'fright'	/ŋe:ŋem/ 'hearing'	
/pam-t/ 'the man'	/ŋan-t/ 'it's me!'	/man-t/ 'neck!'	/naŋ-n/ 'his'.	

All five nasals contrast in the following set of CVCVC:

/ŋuman/	/punan/	/munañ/	/ŋuñan/	/nuŋan/
'approach'	'banana'	'called'	'sea'	'to visit'.

Word-finally, bilabials and alveolars contrast, but only one example of the dental nasal occurs; /ruñ mopŋun/ 'butterfly':

/piram/ 'bladder'	/ri:ran/ 'by himself'
/wañam/ 'from the poor chap'	/pañ'an/ 'boy (Agt)'
/pa:tum/ 'from the fire'	/pa:tun/ 'into fire'.

(c) Continuants

The trilled vibrant [r̃], the retroflexed continuant [ṛ], and the lateral continuant [l] contrast with each other. Following evidence proves them to be separate:[1]

Word-initially in the CVC pattern:

/rij/ 'a grass'	/liŋ/ 'flash of torch'
/rat/ 'book'	/lak/ 'speared'
/ruj/ 'ashes'	/lup/ 'in'
/raw/ 'dig'	/law/ 'break',

Word-finally:

/pur/ 'push'	/puř/ 'throw down'	/pul/ 'they two'
/kar/ 'like'	/pař/ 'big lily root'	/pal/ 'come'
/t̲u:r/ 'marrow'	/t̲u:r̃/ 'alight'	/ku:l/ 'crowd'
/por/ 'blister'	/t̲uř/ 'jump'	/t̲ul/ 'woomera'
/war/ 'white T-tree'	/wa:r̃/ 'bad'	/wal/ 'basket' /wa:l/ 'silly'
/tur/ 'hit nape (neck)'	/t̲uř/ 'jump'	/t̲ul/ 'woomera',

Medially in CVCV pattern:

/yu:ru/ 'with (sore) hand'	/yu:ra/ 'go afar'	/yulu/ 'apple-tree'
/ma:ra/ 'husband'	/ya:ra/ 'go away'	/ka:la/ 'uncle'
/miri/ 'sunset glow'	/kiři/ 'go on!'	/mele/ 'owner'
/pi:ra/ 'moss-fly'	/yi:ra/ 'for another'	/rila/ 'scrotum',

Medially in CVCCV (sequence):

/werke/ 'rub' /weřke/ 'white gum tree' /kolke/ 'stonescraper',

CVCVCC (sequence):

/mepir̲t/ 'policeman bird' /kopuř̲t/ 'red snapper' /ratilk/ 'grass-hopper',

---

[1] The trilled /r̃/ does not occur word-initially. It's voiceless allophone occurs rarely between voiceless stops only. Intervocalically, it may sometimes be flapped: e.g. /iři-pan/ 'go to the south bank of the river'.

In C_2, they contrast in consonant clusters:

/purŋ/ 'blunt' /kuřj/ 'cold' /kuln/ 'possum'

/pork/ 'big'
/ko:rn/ 'mangrove' /yořp/ 'other way up' /moln/ 'ants'

/purp/ 'lily root'
/purt/ 'pass wind' /nuřt/ 'it's you (pl)' /nult/ 'it's him!'

/rerm/ 'saltpan' /tařn/ 'firm' /peln/ 'they'[1]

Similarly, in CVCCVCC where C_5 is the bilabial nasal:

(/ta-turm/ 'close, beside') /koŋkuřm/ 'a fish' /koŋkulm/ 'hand-bag'.

Clear contrast occurs in some triple clusters (medially):

/kornt/	/pa:řmt/	/pelnt/
'black flying-fox'	'You were crying'	'it's them!'

Intervocalically, in CVCVC, all three contrast well:

/piram/ 'bladder' /yiřam/ 'some' /wilar/ 'sister (Ag)'

/merem/ 'know' /teřep/ 'rock' /teler/ 'uterus'

/turur/ 'leaking' /nuřur/ 'you yrslvs' /nulur/ 'he himself'

/warin/ 'chase' /wařam/ 'bad (one)' /ŋalin/ 'belong you-me'

/tarak/ 'stand it up' /kařap/ 'white ibis' /ka:lat/ 'realise'.

Word-finally in the same shape:

/ŋapar/ 'slice' /tapař/ 'lightning' /yu:wal/ 'return from afar'.

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[1] Using a place-name:

/Purp/ 'Place-name' /puřp/ 'grab' /pult/ 'it's them two'.

5.1.3.3 Consonant A l l o p h o n e s

Diverse environments in Ta:yoɾ̃ words manifested patterned variations of consonant phonemes.[1] Oppositions, mainly for stops, relevant to this work, show the following kinds of differentiation:

Voiced/voiceless
Aspirated/unaspirated
Fricative/non-fricative
Fronted/backed point of articulation[2]
Stressed/unstressed
Word-initial/medial/intervocalic/final
Released/unreleased/nasal-release
Order within a sequence, $C_1/C_2/C_3/C_4/C_5$
Lenition/fortition[3]
Part of tongue used, tip/under-tip/blade/root/sides
Quality of contiguous vocoids, F/C/B and H/M/L[4]
Point of articulation of contiguous consonants
Presence/absence of word-initial consonant.[5]

The chart following shows what happens to Ta:yoɾ̃ stops when they are modified by their environment:[6]

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1 Stops, nasals, glides, continuants as in 5.1.3.1.

2 e.g. velar versus non-velar.

3 Fortis sounds have relatively more vigorous articulation than lenis.

4 Front/central/back and high/mid/low.

5 By elision.

6 To be distinguished from phonemic interchange at a close point of articulation: e.g. [pam 'tu̲:mp^h] ~ [pam 'lu:mp^h] 'old greyhead'.

Allophonic variation in stops (Table 8)

The chart below indicates how the articulation and release of stop phonemes is affected by their environment:

Environmental restriction	R e m a r k s
Morpheme-initial C_1 /kam/ 'blood' /to:mp/ 'smoke'	Usually aspirated, voiceless and fortis[1]
Syllable-initial on the main stress /'tin"ka/ 'with wax'	The same as above for C_1, but reduced for C_3
Syllable-final, not on the main stress /'wut"pa/ 'by a storm-bird' C_2	Usually unreleased, unaspirated and probably lenis
Syllable-initial, and stressed after open syllables, virtually morpheme-initial /'ya"ka/ 'by a snake'	The same, but less so through phonetic 'geminat-ion' of the stop and a delayed release
Syllable-initial, unstressed in CC-cluster /'ŋo:n.to/ 'blowfly' C_3	Unaspirated and lenis with no transitional V because same point of articulation (n,t)
Syllable-initial, unstressed in CC-cluster with transitional V /kolke/ ['kol^{o}kɛ] 'scraper' C_3	Virtually intervocalic, unaspirated, voiced and lenis at the different p.o.a.[2]
Inter-vocalic after main stress	Unaspirated, voiced and lenis
Inter-vocalic before main stress /'po"kon/ 'nothing'	Aspirated, voiceless and often fortis

[1] [p, t, k] tend to be voiceless, aspirated and fortis as opposed to [b, d, g] which are usually voiced, unaspirated and lenis. But the degree of each variable is relative.

[2] Point of articulation; velars are fronted and backed by contiguous consonants and vowels.

(continued)

Environmental restriction	Remarks
Word-final in CVC C_2 /t̲ip/ 'liver'	Mostly released and aspirated[1], for emphasis[2]
Word-final in CC-cluster CVCC(C) /ŋe:ŋk wañj/ 'sore stomach'[3]	Released and aspirated before juncture
Word-final in medial CC-cluster of compound[4] /ŋe:ŋk-(k)u:l/ 'angry' CVCC(C)	Unreleased, unaspirated when assimilated to suffixed word[5]
Word-final after long vowel /ŋo:p/ 'dog-tick'	Less frequently released and aspirated (except for emphasis)[6]
Before a consonant C_2 in CVCC /patp/ 'camp' (vb) C_2	Usually unreleased, and unaspirated
Reduplicated CV-syllable word-initially C_2 /ko:-kope/ ['ko:"ɡope] 'waiting'	C_2 becomes a voiced lenis fricative in allophonic alternation with C_1
C_1 in second lexeme of a closely linked pair of words[7] /pam t̲u:mp/ ['pɑm "t̲ʊ:mp] 'old man'	The same owing to the affinity between the head and its contiguous qualifier[8]

[1] The dental and alveolar stops are more frequently released, for phonemic distinction is more needful.

[2] Stops may even be phonetically glottalised in extreme fortition (though lenis glottalisation is not unknown).

[3] cf. nasal release in CVC.CC: e.g. /p/ before syllabic /m/ in ['t̲ɑn.p̬m̬] /t̲anpm/ 'was kicking'.

[4] When two free morphemes are linked into one word.

[5] See footnote to elision in 5.1.3.4; cf. /'punkur(t)añ/'hunger'.

[6] V-length seems to deter release of stops except for /t̲/ and /t/.

[7] Emically, Head + modifier are 'joined' phonologically.

[8] Certain cases of Head + qualifier are fused virtually into one compound grammatical unit; see note 2 on page 62.

Description of allophonic variation in consonants

Sixteen consonants in Ta:yoř comprise five stops (including the glottal stop[1]), five nasals (at the same points of articulation), and five other consonants at various points of articulation.

(a) Stops

Articulation of stops occurs at the following points: /p/ bilabial, /t̪/ dental, /t/ lightly retroflexed alveolar, and /k/ velar. The glottal stop /'/ occurs. Ta:yoř stop allophones include the voiced/unvoiced, the aspirated/unaspirated, released/unreleased and the fricative/non-fricative variations.

The Ta:yoř /t/ is normally lightly retroflexed, and fully so when following [r̺], the retroflexed continuant. This alveolar /t/ having a slightly retracted tongue tip, contrasts with dental /t̪/ following a retroflexed /r/, phonetically:

e.g. [mɪn̪ 'mɛpɪr̺t̪^{h}] 'policeman bird'.

The release/non-release of stops is normally predictable: e.g. in monosyllabic replies, discourse-bound, final stops tend to be unreleased, particularly in exclamations and imperatives: e.g. [tɛp^{h}] 'be quiet!'; [tɑk^{h}] 'leave it!' [yʊp yɑn-ɑy] 'I'll go soon'. Stops not on syllable boundaries are unaspirated, unreleased:

e.g. /katp/ 'grab' /petn/ 'skin' /ŋotn/ 'black'
/putn/ 'shield' /wu:tp/ ~ [mɪn̪ wʊtp^{h}] 'stormbird'.

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[1] Largely peculiar to Cape York.

[2] A. Capell. A new approach to Australian linguistics, 1962, 5. He thought the plosive had developed differently in the Wik and Koko groups, being not devoiced from /b, d, g/ elsewhere.

Stops may be unreleased when contiguous to consonants of close point of articulation, or if followed by bilabials, when the lips may be closed while the tongue continues at its point of articulation: e.g. ['pʊtpən] 'on top'.[1]

/p/ has an alternative nasal release used by most speakers word-medially before /m/. It is a voiceless velic flap with the lips closed as in /t̲anp-m/ ~ ['t̲^{h}ɑn.p̃m] 'pushed'. Diverse release occurs in /t̲ut̲putpan/ 'gecko' ['t̲^{h}ʊt̲^{ə} p^{h}ʊtpɑ^n].

The glottal stop is not common, and is virtually omitted at speed in some words. Its omission effects length in fused vowels enclosing it. Although it sometimes separates /r̃/ from /r/, e.g. /paɾ̃'r/ 'boy', yet this is not necessarily so: e.g. /pa:r̃-r/ 'cried'; /yuk kupaɾ̃-r/ 'fig-tree'. The present study confirms O'Grady's theory that a weakening of glottalisation is affecting certain languages.[2] In Thaayorr, a fast rate of utterance, rather than the 'influence of English', affects it.

Stops are usually voiceless, aspirated and fortis word-initially, where the stress falls, but in words of two morphemes the opposite may occur. The second morpheme tends to compete with the first and receives a stronger accent:
e.g. ['po"k^{h}on] 'nothing'; cf. /pok-p/ ['p^{h}ok^{ʊ}p] 'nothing again'.

Unstressed intervocalic stops are unaspirated, while stressed ones are not: e.g. [mɪn̲ 'k^{h}o̲ton] 'wallaby' contrasts with ['ŋɑ"t̲^{h}ʊn] 'to me'. Elision of a morpheme-initial C_1 causes final -C to become intervocalic and thus unaspirated:
e.g. /'ŋok(k^{h})arin/ ['ŋo.'k:ɑ.rin] 'no water', with the main stress on C_2.

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[1] Unreleasing of stops obviates the intrusion of transitional vocoids: e.g. [kotpor] 'cuts'; [yʊp(p)ɑl] 'come soon'.

[2] G.N.O'Grady. Proto-Ngayarda phonology. Oceanic Linguistics, 5, 2 (1966), 87.

After word-initial long vowels, the following consonant (C_1) is intervocalic and therefore unaspirated, voiced and lenis: e.g. /'i:kan/ 'up there', /'i:kaw/ 'there in the east'.[1] Although the above words are of two morphemes, primary stress remains word-initial, for the second morpheme is only a recurring directional particle (following also |V:-|).

Transitional vowels tend to separate contiguous consonants at syllable boundaries in compounds, when different points of articulation are involved: e.g. ['kɑ:lᵊ "pʊɽŋ] 'forget'; ['kʊlᵘ-'pʊŋk] 'crowd'.[2] These stops are virtually intervocalic and therefore unaspirated and voiced lenis. In word shapes involving CVCC and a similar point of articulation, morpheme-initial stress effects aspiration and voiceless fortition: e.g. /'nam'pin/ 'emu (erg.)'; /'pa:n'tu/ 'woman (agt)'; but more aspiration accompanies /p/ than /t/ of the second example.

The dental /t/ shows somewhat less aspiration than other stops. The amount varies with the alveo-palatal affricate /j/, being greater word-initially. Free variation between full phonemes is influenced by lenition at the same point of articulation: e.g. /pam lu:mp/ ~ /pam tu:mp/ 'old grey-head'. Likewise /kunk-lanr/, 'recuperate', sometimes replaces /kunk-tanr/. Lenition of the stop /p/ in an unstressed syllable-initial slot causes the appearance of the voiced lenis fricative, which then fluctuates to /w/: e.g.

/i:pal/ - ['I:ʁɑl] ~ /'i:wal/
/yu:pal/ - ['yʊ:ʁɑl] ~ /'yu:wal/
/'palpal/ - ['pɑlʁɑl] ~ /'palwal/.[3]

---

[1] Varying degrees of aspiration and voicing combine to make a variety of acoustic effect.

[2] Noun-classifiers are linked very closely with their noun and form a word unit which shows similar voicing and unaspiration: e.g. ['mIn̥ᵊbo:koɾ̃] 'red kangaroo'; ['mIn̥ᵊbo:pʊʔn] 'fur'.

[3] This third example shows reduplication, /w/ being infrequent.

Point of articulation affects consonants environmentally. Thus, bilabials with no stress may undergo lenition as far as /w/, while dental stops in allophonic alternation become interdental voiced fricatives.[1] Alveolars are influenced by the common apico-domal continuant /r/, and /t/, especially, is always slightly retroflexed.[2] The lamino-palatal affricate is mostly voiceless, but not without allophones.

(b) Nasals and affricate

Nasals show less variation than stops, being without distinctions of voicing and aspiration. The interdentalisation of /n̲/ is not common and varies from speaker to speaker, mostly word-initially: e.g. [ˈn̪ɑkʌ] 'here'. It cannot be said that /n̲/ always becomes interdental like its corresponding stop, /t̲/, but /n/ is always retroflexed after /r/.[3] Alveopalatal /ñ/ appears to constitute a single phonemic segment, but its functional load is negligible. As it occurs in all environments, word-initial, medial and final, its status is clearly compound but a single segment.

Such compound phonemes, /j/ and /ñ/, ([t̲ˢ] and [ŋy])[4] are single phonemes on the basis of word and syllable patterns. The apico-lower-dental, lamino-palatal affricate is aspirated morpheme-initially, and unaspirated intervocalically, but is seldom voiced like the stops. For example:

[ˈtyʰɛːr̃]	/jeːr̃/ 'sorry'	[ˈkʰɛ tyɛr̃[	/kejer̃/ 'fresh'
[ˈt̲uˈtyʰɑn]	/ˈt̲uˈj-an/ 'in the bush'	[ˈkʰɑ tyɑr]	/kajar/ 'crane'
[ˈrɑñˈtyI tyʰ]	/ˈranˈj-ij/ 'go jump!'	[yoːñ tyʰ]	/yoːñj/ 'dust',

---

[1] Some linguists have proved some Aboriginal fricatives to be phonemic.

[2] See below in this section.

[3] Nasals rarely cause voicing in contiguous stops, though they themselves are always voiced.

[4] Caused originally perhaps by a contiguous /i/ > /y/.

Word-finally, the affricate is aspirated. As with stops, intervocalically, (even after transitional vowels,) it is slightly unaspirated. Before a syllable border, its affrication and aspiration help to cause the transitional vocoid which links it to the next syllable, in ['ŋɑñty$^{h\ə}$n̪ɑn] /ŋañ.j^{i}.n̪an/ 'ours (exc.)'

(c) Morphophonemic factors

Certain morphophonemic factors influence the consonant phonemes. Thus the semivowel /y/ appears intermittently before /i/ as a lenis 'prefix' in many vowel-initial directional terms: e.g. in /i:wal/ ~ /yi:wal/ 'come from there'.[1]

Elision takes place word-initially when C_1 is lost in favour of the final |-C| of a preceding word. Several words are telescoped in fast speech, each elided C_1 enabling the reduced word to receive the final consonant of the previous word as a C_1 substitute:

/waŋ(n̪)amp/ 'whiteman's name': /ŋanam(ŋ)at̪n/ 'my mother'
/wun(ŋ)ay(n̪)aka/ 'stay I here'
/puř(t̪)ak-ař(n̪)ul(n̪)un̪/ 'down put he it'

Stress in the T̪a:yoř word is non-phonemic and always morpheme-initial:[2] e.g. ['wɛ.lɛ] 'bailer-shell' ['t̪ɑ.wɑt̪] 'dish'. Nouns preceded by a noun-classifier are neither joined nor hyphenated in this work. Each comprises normally a single morpheme and has its own predictable word-initial stress which affects the aspiration of stops: e.g. ['mIn̪$^{\ə}$'kot̪on] 'wallaby', ['ɽʊř 'mo:ln] 'small black ant', ['yʊk('k)ọrọn] 'milky pine'. Words comprising two or more morphemes, such as a noun + suffix, have an accent on the initial syllable of each half:

['k^{h}ɑ:lgʊř ty] 'wintry' ['I't̪-ɑřko] 'oh dear!'
['ŋɑ't̪-ʊn] 'to, for me' ['pɑ:n̪'t̪-ʊ] 'woman' (S.)
['k^{h}ɑ:l'bʊrŋ'mɑt] 'forgot' ['k^{h}ɑnɑ't̪ř] 'now then!'

---

[1] Note also the occasional dialectal presence of /ŋ-/: e.g. /it̪/ ~ /ŋit̪/ 'that'.

[2] Treated in section 5.1.7.2.

['ŋay 'ŋɛ:rŋkan 'wuw-i'r̃-(n̲)un] 'I yesterday meet did him'
['t̲ʰɛ:r'ŋ-ar̃-'y-un̲] 'struck did I him'
['kʰo: 'kʰana 'l-(ŋ)at̲n] 'Oh, lucky for me!'
['yup 't̲ʰɛ:ɾŋn̲-'(ŋa)y-(n̲)un̲] 'I want to kill him soon'.

Reduplication of a syllable (or part) affects the phonetic features of consonants. Initial stops are mostly stressed, aspirated and voiceless. But when prefixed by the reduplicated CV- syllable, the new C_2 usually becomes unstressed, unaspirated, voiced and lenis. A dental stop will become an interdental voiced fricative reflection of its word-initial counterpart. Thus [pʰ] becomes [ƀ], /t̲ʰ/ becomes [d̲̲], /t/ becomes [đ] and /k/ [g].

This allophonic alternation of the voiced fricative with the unvoiced stop also occurs in words containing reduplicated syllables. For example:

['kʰeygey] /keykey/ 'baby' [mIn̲ᵊkʰagakr̃] /kakakr̃/ 'a bird'
['kʰagaŋpa] /kakaŋpa/ 'firstly' ['pʰukd̲̲ak] /puk̲tak/ 'in a book'.

Verbs reduplicated to express continuity, are also affected:

['kʰo:pɛ] 'wait' ['kʰo:-gopɛ] /ko:-kope/ 'waiting on ...'
['t̲ʰowol] 'play' ['t̲ʰo-d̲̲owol] /t̲o-t̲owol/ 'playing on ...'
['pʰa:r̃] 'play' ['pʰa:-ƀar̃] /pa:-par̃/ 'crying on ...'.

Contrast has never been found between stops and their corresponding fricatives (at the same point of articulation). In colloquial speech, they may fluctuate between moods and speakers. Closely linked morphemes demonstrate the same tendency: e.g. head-nouns + bound morphemes:

['pʰa:n̲tʰᵊ-gakʰ] /pa:n̲t-kak/ 'got a wife, married man'
['pʰa:t̲ʰ] /pa:t̲/ 'fire, hot' [pʰa:-ƀat̲] /pa:-pat̲/ 'sultry'
['kʰulᵘƀa:t̲] /'kul-pa:t̲/ 'sweet' ~ /kul-wa:t̲/ (p ~ w).

Such alternation occurs also in V-initial word shapes:

['i:r̃ᵊgop] /i:r̃kop/ 'go down there' ~ /i:r̃-wop/.

Combined factors of stress and suffixation are well illustrated by the following contrastive expressions:

[ˈkʰɑ̱tɪn ˈkʰʊnˈkʰɑm] 'yamstick' /ka̱tin kunk-am/,

where all velar stops are stressed, aspirated, voiceless fortis.

[ˈkʰʊnᵘgoɾ̃ɛ] 'go backwards' /kun-koɾ̃-e/, where velar C_3 is unaspirated, voiced lenis and also intervocalic.

[ŋanᵊgɑ:lɑ] 'uncle', [mɛ̤:r̤ᵊgolɛ] 'taipan' and [ˈmɪn̲ᵊbo̤:r̤o̤] 'black duck', where attributives + head demonstrate allophonic fricative variation:

e.g. [pʰɑm d̲̲ɛ:rŋr] 'man (who) hits' /pam t̲e:rŋr/.[1]

Analysis of a specific utterance usually requires the study of its phonological features aided by some grammatical clues. Fuller diagnosis is sometimes possible if the morphological affiliations have been recognized:

e.g. [ˈkʰʊlɑm ˈd̲̲oŋkon] 'halfway' /kulam t̲oŋkon/

[pʰʌm ˈd̲̲ono ˈmʌtᵉrm ˈr̤i̤r̤k ˈpʰʊlʊkˈd̲̲ɑk, ˈmʌtᵉr̤ᴵˈm-ɑk ˈyɑ:n]

/Pam t̲ono matrim - rirk puluk-t̲ak, matrim-ak yan/

'man one mustering-did bullocks-for mustering-to goes'.

(d) Miscellaneous comments

(i) Retroflexion of consonants (and vocoids,) by interpretation of univalent words makes [t̤] apico-domal only because it follows the retroflexed /r/.[2] Before retroflexion, two segments may frequently be influenced by the same factor; e.g.

[kʰɪ̤r̤kʰ] /kirk/ 'spear' [ˈr̤ɪ̤r̤k̤r̤] /rirkr/ 'arise'.

Informants have demonstrated that the tongue-tip is curled right up even for the initial /k-/.[3] The vowel is affected too, by

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[1] Where a verb functions as an adjective to qualify a noun.

[2] Phonemic status is admitted for /d̤/, /l̤/, /n̤/ in Australia.

[3] Easily authenticated in informants with missing teeth.

retroflexion (and centering in an unstressed syllable).[1]

(ii) The problems of interpretation made it necessary to select different word shapes to demonstrate the relation between the retroflexed continuant and syllabic patterning.[2] The study of CC-clusters facilitated its establishment as a separate phoneme, so that [t̤] was called an allophone of /t/ (following /r/), not one complex phonetic segment, /t̤/. In this way, many relevant CC-sequences received the /r/ as an initial segment. In addition, syllabic /r̩/ is common, and functions frequently as a vowel in CV syllables: e.g. /te:r.kr/ 'returned'.[3] But, while functioning as a vowel itself, the apico-domal continuant exerts strong influence on many phonemes. It is such a prime cause of centralisation and retroflexion of all vowels, that the number of phonetic segments present is questionable.[4]

(iii) The phonemes /r/ and /l/ are phonetically very alike. In some words they seem to be in free fluctuation:[5]

e.g. /pork/ 'big' ~ /polk/ and /torkoř/ 'tall' ~ /tolkoř/.

(iv) Allophonic substitution of [r] for [r̃] may possibly occur in one sample: e.g. [kɑtp-ir-y] /katp-iř(ŋa)y 'caught I'; this could alternatively be:

[mɛ:l-plɛ:n k^hɑtp^Ir(ŋɑ)y] 'mail-plane caught I'.

The lax articulation at the end of the utterance, with falling intonation, might well explain the one solitary tongue-flap which virtually substitutes /r/ for /r̃/.

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[1] [ɪ˃] becomes [ə].

[2] e.g. in section 5.1.3.2 (c) and in 5.1.4.2.

[3] With or without transitional vocoidal onset [-i, -ə or -ʊ̯r̤].

[4] e.g. [k^hr̤k^h], /krk/, kirk/, |C(V)rC| 'spear' /kr:k/.

[5] Dialectal differences are not being considered in this thesis.

(v) Contiguous consonants over syllable boundaries may be separated by transitional centralised vocoids, when their points of articulation are different.[1] This is contingent on 'release' of the stop concerned. Such phonetic vocoids harmonise with the preceding vowel:

e.g. [ˈhɑ: n̪ʊ nt^{ʊ} ˈk^{h}ɑt^{ə}ˈlɛ: mɪn̪$^{ɪ>}$ ˈpo̤ro̤ ˈk^{h}ɑt̪ɑr̃-nt^{h}]
/ Ha: n̪unt kat-le: ; min̪ poro kat̪-ar̃-nt./
'Hah, you tie-it-up; the duck tied-did-you.'

Such transitional vowels do not occur when two contiguous consonants have the same point of articulation, when the second undergoes elision, or when a nasal assimilates to 'its' stop:[2]

e.g. /pu:ŋ kana yat/ [p^{h}ʊ:ŋ ^{k}gɑna yɑt^{h}] 'the sun did set'.

(vi) The leniting or elision of initial consonants of pronouns may indicate how pronominal suffixes readily become bound morphemes on verbs:

e.g. [ˈpɑtp-Ir̃-ɓʊl] ~ [ˈpɑtpIr̃ʊl] /patp-ir̃ (p)ul/
'Slept-did they-two'.

So too for nouns with locational suffix:

e.g. [mʊt^{ʊ}a̠ɑk^{h}] ~ [mʊt:ɑk] /mut(t̪a)ak/ 'on the back'.

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[1] Transitional vowels have already been cited as one factor causing unaspiration in stops.

[2] e.g. [mɪn̪ t̪ɔp] /min̪ t̪op/ 'good hunter'(dog); cf. [mɪn̪^{ə}ˈkʊl^{ʊˀ}n] /min̪ kuln/ 'possum'.

5.1.3.4 Distribution of consonant phonemes

Salient features of consonant distribution are the following:

The 26 phonemes undergo dispersal through the words of Ta:yoř by means of patterned syllables. The eight different shapes of syllable, comprising from one to five segmental phones, effect distribution of consonant phonemes. Words may consist of only one vowel, but not of a single consonant. Only one vowel may occur (as nucleus) in each syllable, but up to four consonants are possible.[1] They are identified as C_1 to C_5. Ten C-phonemes may occur as syllabic nuclei to syllables.

Phones possessing common phonetic characteristics and comparable positional variants do not always have relatively similar frequency of functional load.[2] Systematic patterning characterises the various phoneme classes, even to the preference for certain positional slots.

Any phone but /ř/ and /n/ may occur word-initially, but once only does /ñ/ occur in that slot.[3] All consonants and vowels may function as syllable onsets, but not all consonants can function as syllable codas. Of the 16 consonants, /l/, /w/ and /y/ show considerable restriction. Word-patterning affects the distribution of phonemes, and syllable-shape, their interpretation. Both /ř/ and /n/ may occur syllable-initially as syllable-onsets. Dental /t-/ occurs in any position, but few examples of alveolar /t-/ have been found word-initially:

e.g. /tep/ 'be quiet!' /tak/ 'with a stick'.

Similarly, /n-/ occurs anywhere, but /n/ cannot begin a word. Specific sequences of consonants and vowels appear in tables which result from statistical analysis by computer.[4]

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[1] See section 5.1.5.1 for syllable types.

[2] But may have relatively similar ranges of distribution.

[3] /ñoř/ 'intuitional sensation in the throat'.

[4] See sections 4.3 and 5.1.4.5.

(i) One phoneme, the apico-dental, lamino-palatal affricate, [ty] /j/, as a sample, manifests little restriction in its distribution through the Thaayorr word:-

Word-initially, it may be followed by any short vowel, and by the high front vowels /e:/ and /i:/; for example:

/ja/ 'shut up!'	/jat/ 'speared'	/je:ř/ 'sorry'
/ji:/ 'come here dog'	/ji:ř/ 'arrive'	/jol/ 'wade'
/ju/ 'shoo!'	/jun/ 'stand it up'	/juř/ 'spear-noise'.

Word-finally, /a, i, u, a: and u:/ precede it in:

/kapaj/ 'cloud'	/ka:lkuřj/ 'cold'	/kuk/ 'cool it'
/ku:j/ 'kangaroo'	/manuñj/ 'nod'	/meñj/ 'a well'
/ŋa:j/ 'full up'	/ŋañj/ 'secret'	/paj/ 'rise'
/ri:tj/ 'run'	/tanij/ 'go stand up'	/tij/ 'sparrow'
/tuj/ 'scrub'	/tutj/ 'cotton tree'	/waj/ 'look out'.

Sequences occur:

/kañjit/ 'sand'	/keñjeyr/ 'catch on line'	/kuñjun/ 'pandanus'
/kuřja/ 'cold'	/meñjen/ 'well water'	/miñjmunt/ 'swim'
/miñjwañj/ 'sick'	/pa:njir/ '1 year gone'	/yanjm/ 'went'.

Intervocalically, /j/ can be enclosed by any short vowel, but itself follows only /a:, o: and u:/ :

/eja/ 'thanks'	/keje/ 'no'	/kijař/ 'hungry'
/rujija/ 'dirty'	/ta:jam/ 'bark-hut'	/tujam/ 'from bush'
/wunijim/ 'lying down'	/yu:jur/ 'ache'	/kejeř/ 'fresh'.

(ii) The presence of /r/, and the absence of any retroflexed phones, word-initially, confirm their interpretation as two segments. But /r/ is common as syllabic nucleus; this analysis also interprets it as a semi-vowel.[1]

---

[1] Table 5 in section 5.1.3.1.

Limitation in distribution of phonemes through the syllable affects their distribution also in words. Consonant clusters never occur initially in syllable or word, but they end both. One extra consonant may be added between syllables.[1]

The restrictions on consonant sequences is related to homorganic clusters. Both /j/ and /ñ/ occur word-initially, so that their interpretation as single segments seems justified.[2] The following charts show such occurrences as sequences beginning with stops, nasals and semivowels. Sequences of -CC found inword-final segments of monosyllables include:

(Table 9)

rp	r$\underline{t}$	rt	.	rk	.	rm	rn	rŋ
r̃p	r̃$\underline{t}$	r̃t	r̃j	r̃k	.	.	r̃n	.
lp	l$\underline{t}$	.	.	lk	.	.	ln	.
mp	m$\underline{t}$	.	.	.	.	.	.	.
.	$\underline{nt}$	.	.	.	$\underline{n}$'	.	.	.
np	n$\underline{t}$	nt	nj	nk	.	nm	.	nŋ
.	ñ$\underline{t}$	.	ñj	.	.	.	.	.
.	ŋ$\underline{t}$	.	.	ŋk	.	.	.	.
tp	t$\underline{t}$	.	tj	.	.	.	tn	.
yp	y$\underline{t}$	.	yj	yk	.	.	.	.

In monosyllables, word-finally, six sequences of consonants occur, -rmp, -l$\underline{nt}$, -$\underline{n}$'$\underline{n}$, -rnt, -rŋk and -r̃$\underline{t}$p. Almost any double CC-cluster may have the additional suffix, /-$\underline{t}$/.[3]

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[1] Transitional vowels appear when points of articulation differ. But two vowels are rarely contiguous; transitional consonants separate them over word-boundaries (or syllable boundaries). The first may cause the second to be assimilated when a final vowel is followed by itself.

[2] Even if the initial syllable had been elided in this dialect.

[3] Focus marker: e.g. /peln-$\underline{t}$/ 'it was they!'; [ŋay$^{I}\underline{t}$] 'it was I'; this morpheme is virtually the 'definite article' sometimes.

(iii) Elision of word-initial phones

Elision of word-initial consonants is a characteristic feature of Thaayorr speech. After word-final consonants, the following C_1 is often lost.[1] The frequency of these elisions depends on the rate of utterance. On repetition, an informant may re-insert the elided phone, especially to Europeans. The following summary compares frequencies of elided/non-elided phones in the computer corpus:

(Table 10)

Frequency of elision	Phone elided	Normal frequency	%-age
106	ŋ-	349	30.4 %
97	n-	195	40.9
41	nu-	187	21.9
18	p-	215	8.4
14	k-	189	7.4
11	r-	112	9.8
10	t-	114	8.7
6	ŋa-	307	1.9
6	y-	155	3.8
3	w-	96	3.1
1	i:-	74	1.3
1	l-	6	16.6
1	pa-	131	.7
1	pu-	101	.9
Total: 316		2,231	14.1 %

About 14.1 % of word-initial phones, almost entirely consonants, may be omitted in normal speech.[3] Mostly nasals, but also stops and semivowels are lost.[4] Further, /m/ has been lost elsewhere (besides many bound pronouns not found in this corpus).

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[1] Occasionally, the following V_1 is elided with it.

[2] /-n-/, morpheme-initially in bound morphs elided 5 X; /nu-/ 2X.

[3] In the processed corpus of 2348 words, word-initially.

[4] /u/ and /a/ also subject to elision following their C_1.

5.1.3.5 Frequency of consonants

Six computer programmes served to 'run' a corpus of 2348 words.[1] Processing yielded frequency statistics for consonants and their sequences in the text. Programme A elucidates the relative frequency of consonant phonemes. (Table 11)

Order	Phoneme	Occurrences	%-age in text
1	/k/	759	11 %
2	/n/	702	10
3	/ŋ/	671	9
4	/p/	644	9
5	/l/	620	9
6	/n̲/	592	8
7	/r/	501	7 %
8	/t̲/	437	6
9	/r̃/	431	6
10	/m/	397	5
11	/y/	350	5
12	/w/	242	3 %
13	/t/	222	3
14	/j/	134	1 %
15	/ñ/	66	0 %
16	/'/	64	0

Total number of consonants: 6832 (cf 3533 vowels)
Consonants to vowels: 193.38 %
Vowels compared to consonants: 51.71 %
Consonants compared to all phones: 65.9 %
Vowels compared to all phones: 34.08 %

Thus, consonants comprise two thirds of all phones, being twice as numerous as the vowels. Vowels comprise (about) one third of all phones. More consonants than vowels are elided in normal speech, but many transitional vowels occur.

[1] Sections 4.3 and 5.1.4.5.

Frequency of consonants per word

Programme B counted the number of consonants which occur in words of different length, and gave percentages:

Number of consonants per word

One consonant	25	words	1 %
Two consonants	1103	"	47
Three "	583	"	24
Four "	399	"	17
Five "	135	"	5
Six "	57	"	2
Seven "	14	"	0 %
Eight plus consonants	17	"	0

A total of 2,333 words is given from this particular programme's analysis of the corpus. The total number of consonants was 6832.

Final |-CC| sequences from the processed text (a)

The following clusters stand in order of their frequency in the processed text:

Frequency	Sequence										
37	ln										
32	nt										
30	mp										
29	lp										
27	rk										
21	np										
15	kr	nr	rp								
14	tn										
13	r̃p										
12	ŋk										
11	nt										
7	lr	lt									
6	km										
5	nt	wr									
4	tn										
3	kn	tm	np	ñj	ŋn	r̃t	tn	tr̃	yr		
2	jn	kt	mr	nm	n'	ŋt	pn	r̃n	r̃r	tr	tr
1	jm	lm	mk	mn	nr̃	ŋm	pm	pt	rm	rn	rŋ
		rt	r̃m	r̃ŋ	tj	tp	tr̃	wn	wt	ym	yt

Contrast in presence/absence of word-final CC-sequences

	p	t̲	t	j	k	'	l	r̃	r	m	n̲	n	ñ	ŋ	w	y
p		+								+		+				
t̲								+	+	+	+	+				
t	+			+				+	+			+				
j										+		+				
k		+							+	+		+				
'																
l	+	+							+	+		+				
r̃	+	+							+	+		+		+		
r	+		+		+					+		+		+		
m	+				+				+			+				
n̲	+	+				+		+								
n	+	+	+						+	+						
ñ				+												
ŋ		+			+					+		+				
w		+							+		+					
y		+							+	+						
p	x		x	x	x	x	x	x	x		x		x	x	x	x
t̲	x	x	x	x	x	x	x						x	x	x	x
t		x	x		x	x	x			x	x		x	x	x	x
j	x	x	x	x	x	x	x	x	x		x		x	x	x	x
k	x		x	x	x	x	x	x			x		x	x	x	x
'	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
l			x	x	x	x	x	x			x		x	x	x	x
r̃			x	x	x	x	x	x			x		x		x	x
r		x		x		x	x	x	x		x		x		x	x
m		x	x	x		x	x	x		x	x		x	x	x	x
n̲			x	x	x		x		x	x	x	x	x	x	x	x
n				x	x	x	x	x			x	x	x	x	x	x
ñ	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
ŋ	x		x	x		x	x	x	x		x		x	x	x	x
w	x		x	x	x	x	x	x		x		x	x	x	x	x
y	x		x	x	x	x	x	x			x	x	x	x	x	x

Present

Absent

Word-medial |-CC-| sequences (b)

The following clusters stand in order of their frequency in the processed text:

Frequency	Sequence
35	ř̃k
29	ŋk
25	nt
19	np
16	nn
15	mp tn
14	rk
13	nt
11	kn ln
10	tj
9	ñj
8	rp ř̃m
7	lp nn tp
6	ry tk
5	lŋ nm nŋ pk
4	mt rŋ ř̃ŋ
3	kr mn pn ř̃p tn wn
2	kt lm ln lw nl ŋm rn ř̃n ř̃n ř̃y tm tn ty wt yl
1	jk jm jn jp km kř̃ kt lr mk mn nj nk nr nt nw ŋp pm pr pt py rm rn rt tr tr tř̃ tw wk wm wn ym yp

Contrast in presence/absence of word-medial CC-sequences

	p	t̲	t	j	k	'	l	r̃	r	m	n̲	n	ñ	ŋ	w	y
p		+			+				+	+		+				+
t̲									+		+	+				
t	+			+	+			+	+	+	+				+	+
j	+				+					+		+				
k		+	+					+	+	+	+					
'																
l	+								+	+	+	+		+	+	
r̃	+				+					+	+	+		+		+
r	+		+		+					+	+	+		+		+
m	+	+			+						+	+				
n̲		+														
n	+	+	+	+	+		+		+	+	+	+		+	+	
ñ				+												
ŋ	+				+					+						
w		+			+					+	+	+				
y	+						+			+						
p	x		x	x		x	x	x			x		x	x	x	
t̲	x	x	x	x	x	x	x	x		x			x	x	x	x
t		x	x			x	x					x	x	x		
j		x	x	x		x	x	x	x		x		x	x	x	x
k	x			x	x	x	x					x	x	x	x	x
'	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
l		x	x	x	x	x	x	x					x			x
r̃		x	x	x		x	x	x	x				x		x	
r		x		x		x	x	x	x				x		x	
m			x	x		x	x	x	x	x			x	x	x	x
n̲	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
n						x		x					x			x
ñ	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
ŋ		x	x	x		x	x	x	x		x	x	x	x	x	x
w	x		x	x		x	x	x	x				x	x	x	x
y		x	x	x	x	x		x	x		x	x	x	x	x	x

Present

Absent

Sequences of |-CC(-)| word-medially and word-finally (c)

Frequency	Sequence
57	nt
45	mp
41	ŋk rk
40	np
39	ln
36	lp
35	r̃k
24	nt
23	rp
18	kr tn
16	nn nr r̃p tn
12	kn ñj
11	ln tj
9	r̃m
8	lr tp
7	km lt nm nn
6	nt ry tk tr̃
5	lŋ nŋ pk pn rŋ r̃ŋ wr
4	kt mt r̃n tn wn
3	jn lm mn np ŋm ŋn r̃t tn tr tm wt yr
2	jm kn lw mk mn mr nl n' ŋt pm pt rm rn rn rt r̃n r̃r r̃y tm tr̃ ty yl ym
1	jk jp kr̃ kt nj nk nw nr̃ ŋp pr py tw wk wm wn yp yt

Contrast in presence/absence of all CC-sequences

	p	t̲	t	j	k	'	l	r̃	r	m	n̲	n	ñ	ŋ	w	y
p		+			+				+	+		+		−		+
t̲								+		+	+	+				
t	+	−		+	+			+	+	+	+	+		−	+	+
j	+				+					+		+				
k	−	+	+					+	+	+	+	+				−
'																
l	+	+	−		−				+	+	+	+		+	+	
r̃	+	+	−	−	+	−			+	+	+	+		+	−	+
r	+	−	+	−	+					+	+	+		+	−	+
m	+	+	−		+				+		+	+				
n̲	+	+				+		+								−
n	+	+	+	+	+		+		+	+	+	+	−	+	+	−
ñ				+												
ŋ	+	+	−		+					+		+				
w	−	+			+				+	+	+	+				−
y	+		+		−		+		+	+				−		
p	x		x	x		x	x	x			x		x	−	x	
t̲	x	x	x	x	x	x	x		x				x	x	x	x
t		−	x			x	x						x	−		
j		x	x	x		x	x	x	x		x		x	x	x	x
k	−			x	x	x	x						x	x	x	−
'	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
l			−	x	−	x	x	x					x			x
r̃			−	−		−	x	x					x		−	
r		−		−		x	x	x	x				x		−	
m			−	x		x	x	x		x			x	x	x	x
n̲			x	x	x		x		x	x	x	x	x	x	x	−
n						x		x					−			−
ñ	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
ŋ			−	x		x	x	x	x		x		x	x	x	x
w	−		x	x		x	x	x					x	x	x	−
y		x		x	−	x		x			x	x	x	−	x	x

Presence

Hyphen = 'present elsewhere

Absence

CCC sequences

(Table 13)

The following CCC-clusters (including medial and final sequences of phonemes) are alphabetized and counted. In the text, 74 shapes occur; others found are bracketed:

jlm 1	npp 1	ŋkp 1	rnt 10 *
jtř 1	npr 1	ŋkr 6	rŋk 4
knk 2	n'n 24 *	ŋkř 2	rŋm 1
křn 4	(ntk)	(ŋkt)	rŋn 1
křr 2	ntl 6	(ŋkt)	rŋr 1
lnk 8 *	ntm 1	ŋnm 2	rpl 1
(lnn)	ntř 2	ŋtř 1	rpn 1
(lnn)	(ntt)	pnk 1	rpr 3
lnt 1	(ntw)	(přt)	rpt 1
lpn 1	(ntk)	ptn 2	(rtk)
lpt 9 *	ntl 1	(rkk)	řkn 3
ltř 1	(ntm)	(rkl)	řkr 4
mnp 1	ntn 1	rkm 3	řpn 1
mpl 6	ntř 1	(rkn)	ř'r 11 *
mpm 1	ñjm 2	rkn 5	tjm 3
mpn 6	ñjn 32 *	rkr 16 *	tjn 1
mpp 1	ñjn 3	(rkt)	tjr 2
mpr 5	ñjŋ 7	rkt 1	tmr 1
mpt 4	(ñjp)	(rkw)	tnm 2
mtř 1	ñjt 3	(rnm)	tpr 1
njm 4	ñjw 2	rmn 1	ytn 3
(nkt)	ŋkk 1	rmp 2	wnj 1
nŋr 1	ŋkm 2	rnp 1	
npn 2	ŋkn 5	(rnt)	* frequent

Distribution of consonants in CCC-sequences

Every CCC-sequence in the processed text appears below to distinguish which consonants occur in what C-slots:

Phoneme	First slot	Second slot	Third slot	Total	Order
r	48	0	54	102	1
n̲	27	11	49	87	2
n	19	17	47	83	3
k	8	49	16	73	4
j	2	59	1	62	5
p	3	45	7	55	6
m	25	4	22	51	7
ñ	49	0	0	49	8
l	20	1	14	35	9=
ŋ	20	8	7	35	9=
t̲	2	5	28	35	9=
'	0	35	0	35	9=
r̃	19	6	9	34	13
t	8	16	1	25	14
w	1	0	2	3	15
y	3	0	0	3	16

Consonant priority in CCC-sequences is:

Order of frequency in C_1

ñ r n̲ m ŋ l r̃ n k t p y t̲ j w (not /'/)

Order of frequency in C_2

j k p ' n t n̲ ŋ r̃ t̲ m l (not r ñ w y)

Order of frequency in C_3

r n̲ n t̲ m k l r̃ ŋ p w t j (not ñ ' y)

Order of frequency in Total CCC clusters

r n̲ n k j p m ñ t̲ ' l ŋ r̃ t w y.

CCC-sequences in order of frequency

The following CCC-sequences occurred in the corpus:[1]

Frequency	Cluster								
32	ñjn								
24	n'n								
16	rkr								
11	r̃'r								
10	rnt								
9	lpt								
8	lnk								
7	ñjŋ								
6	mpl	mpn	ntl	ŋkr					
5	mpr	ŋkn	rkn						
4	kr̃n	mpt	njm	rŋk	r̃kr				
3	ñjn	ñjt	rkm	rpr	r̃kn	tjm	ytn		
2	knk	kr̃r	npn	ntr̃	ñjm	ñjw	ŋkm	ŋkr̃	
		ŋnm	ptn	rmp	tjr	tnm			
1	jlm	jtr̃	lnt	lpn	ltr̃	mnp	mpm	mpp	mtr̃
	nŋr	npp	npr	ntm	ntl	ntn	ntr̃	ŋkk	ŋkp
	ŋtr̃	pnk	rkt	rmn	rnp	rŋm	rŋn	rŋr	rpl
		rpn	rpt	r̃pn	tjn	tmr	tpr	wnj.	

[1] The following have been found in monosyllables of one or two morphemes, but do not occur in the processed corpus:

lnt lnt rmp rnt rnt rŋk r̃tp.

CCCC-sequences identified in the corpus are: rmpr (3), ñjnt (2) r̃ŋkn (2), nprp (1), ñjnm (1), rkrp (1), r̃ntr̃ (1) r̃'rt (1), and ytnt (1). Others found elsewhere consist of:

n'nŋ n'np ntr̃n ŋknm pntr̃ r̃'rk ntlw rmpn rmpr.

CCCCC-sequences are three: rkntr̃ (1), rŋrtr̃ (2), r̃"rtp (2).

Distribution of consonants in multi-clusters (word-finally)

The occurrence of consonants in sequences has been summarised in the chart below to show slot-fillers and frequency of occurrence in the computerised text display. (Table 14)

/-/	C_1	C_2	C_3	Tot	C_1	C_2	C_3	C_4	Tot	C_1	C_2	C_3	C_4	C_5	Tot	TOTAL	//
p	2	29	6	37	--	1	3	2	6	--	--	--	--	2	2	45	p
t	--	6	16	22	--	--	1	4	5	--	--	--	5	--	5	32	t
t	7	6	--	13	--	1	--	--	1	--	--	--	--	--	0	14	t
j	1	45	--	46	--	3	--	--	3	--	--	--	--	--	0	49	j
k	3	40	--	43	--	1	2	--	3	--	1	--	--	--	1	47	k
'	--	26	--	26	--	1	--	--	1	--	2	--	--	--	2	29	'
l	8	--	2	10	--	--	--	--	0	--	--	--	--	--	0	10	l
r̃	17	2	10	29	4	--	--	1	5	2	--	--	--	3	5	39	r̃
r	31	1	57	89	4	--	3	3	10	3	--	4	--	--	7	106	r
m	14	3	17	34	--	3	--	1	4	--	--	--	--	--	0	38	m
n	17	--	16	33	--	--	1	--	1	--	--	--	--	--	0	34	n
n	14	1	38	53	1	1	3	2	7	--	--	1	--	--	1	61	n
ñ	36	--	--	36	3	--	--	--	3	--	--	--	--	--	0	39	ñ
ŋ	13	2	--	15	--	2	--	--	2	--	2	--	--	--	2	19	ŋ
w	--	--	--	0	--	--	--	--	0	--	--	--	--	--	0	0	w
y	--	--	--	0	1	--	--	--	1	--	--	--	--	--	0	1	y

Comments on consonant frequency in sequences

Certain phonemes are more common than others in different clusters. A specific C-sequence may appear to be frequent, because only one or two words containing it are common. Phonemes found more constantly are ordered from the left:

CCC-sequences

ñjn n'n rkr r̃'r rnt lpt lnk ñjŋ mpl mpn ntl ŋkr

CCCC-sequences

rmpr ñjnt r̃ŋkn

CCCCC-sequences

rŋrtr̃ r̃'rtp rkntr̃

Consonants in CCC:

C_1	ñ	r	n	r̃	m	n	ŋ	l	t	k	p	j	(not t	w ' y)
C_2	j	p	k	t	t	m	r̃	ŋ	r	n	(not l	n	ñ	w y)
C_3	r	n	m	n	t	r̃	p	l	(not	t	j	k	'	ñ ŋ w y)
Total:	r	n	j	k	p	ñ	m	n	r̃	'	t	ŋ	t	l (not w y)

Consonants in CCCC:

C_1	r̃	r	ñ	n	y	(no others in corpus materials)							
C_2	m	j	ŋ	p	t	k	'	n	(no others)				
C_3	p	r	n	k	t	n	(no others)						
C_4	t	r	p	n	r̃	m	(no others)						
Total:	r	n	p	t	r̃	m	j	k	ñ	ŋ	t	'	n y (not l w)

Consonants in CCCCC:

C_1	r	r̃	
C_2	ŋ	'	k
C_3	r	n	
C_4	t		
C_5	r̃	p	
Total	r	t	r̃

TOTAL order of frequency:

r n j k p r̃ ñ m n t ' ŋ t l y (w).

p ' ŋ k n

5.1.4 Vowels

Ta:yoř vowels are complex, with fine shades of distinction in mouth shape, tongue position and humping, aspiration, friction and other features.[1] They require a threefold factorisation: (i) front-central-back position of the tongue, (ii) high-mid-low level of the tongue, and (iii) rounded-unrounded posture of the lips.[2]

5.1.4.1 Vowel phonemes

Five vowels have been established on the basis of the fundamental feature criteria, point and manner of articulation. The three charts which follow, show (a) contrastive features, (b) contrastive length, and (c) the phonetic description of allophones.

(a) Contrastive feature chart - vowels

(Table 15)	Front	Central	Back
H i g h	i	(ə)	u
L o w	e	a	o

Vowels in unaccented syllables move centrally towards the shva position. This is described in vowel allophones.[3] Comparison of pairs shows that this [ə] need not be set up as a phoneme. But the five-way contrast of vowel quality is fully adequate only in stressed syllables.

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[1] E.A.Nida. Learning a foreign language. Michigan: Friendship Press, (Revised) 1957, 101 f.

[2] See chart in 5.1.2 (b) on page 45.

[3] See section 5.1.4.3.

It is difficult to be certain which actual phoneme (in some words,) is represented by the shva-like vocoid.[1] Length of vowel also, in Ta:yoɾ̃, is contrastive:

(b) Contrastive length[2]

(Table 16)	Front	Central	Back
H i g h	i / i:		u / u:
L o w	e / e:	a / a:	o / o:

All vocoids are voiced with egressive lung air. Abnormal gasps of surprise do use ingressive air on rare occasions, but such an intake of air has no phonemic significance.

Sometimes, 'silent' (voiceless) vowels appeared to terminate some words; e.g. ['nʊnt^{h}U] 'you'(sg) /'nunt/ These were interpreted as non-contrastive.[2]

Long vowels occur normally in the first syllable only, of words. When they are found in other than first syllables, it is because the word is compounded, each half having its own phonemic 'length' when detached, and preserving it in union with another:

e.g. /'ka:l-'ŋe:m/ 'remember' ['k^{h}ɑ:l^{ʊ}'ŋɛ:m],

---

1 Apart from morphological or dialectal analogy.

2 Being of dialectal, not ergative, significance in pronouns.

(c) Phonetic description of vocoids

(Table 17)

Phone	Phonetic description	Phoneme
[I]	High-open front-unrounded vocoid	/i/
[I˃]	The same centralised towards [ə]	
[e]	Mid-close front-unrounded vocoid	/e/
[ɛ]	Mid-open front-unrounded vocoid	
[ɛ˃]	Centralised version of [ɛ]	
[ɛ^{v}]	More open variety of [ɛ]	
[ɑ]	Low-open central-unrounded vocoid	/a/
[ʌ]	Mid-open " "	
[ʌ^{v}]	Low-close " "	
[o]	Mid-close back-rounded vocoid	/o/
[o˗]	The same centralised	
[o^{ʌ}]	The same more close	
[ɔ^{ʌ}]	Mid-open back-rounded vocoid	
[ʊ]	High-open back-rounded vocoid	/u/
[ʊ˂]	The same centralised towards [ə]	
Also heard in some environments and in some speakers:		
[æ]	Low-close front-unrounded vocoid	/e/
[ɔ]	Low-close back-rounded vocoid	/o/
Vocoids may be nasalised when contiguous to nasals:		e.g.
[ǫ]	Mid-close back-rounded vocoid	/o/

5.1.4.2 V o w e l Contrasts

Vowels contrast in length and quality.[1] But environmental factors are able to make the contrast more conclusive. The following areas of contrast are pertinent for Ta:yoɾ̃:

Closed and open syllables

Interconsonantal slots

Quality and length simultaneously

Stressed and unstressed syllables

Before the retroflexed continuant /r/

One/two/three-syllabled words

Initial and final positions

Single/double/multi-morpheme words

Final stressed syllables.

---

[1] Quality of vowels is defined as their recognisable differences relative to mouth size and shape as this is affected by the position of the lips and tongue.

Vowel C o n t r a s t s

(a) In varying syllable and CV-patterns, vowels contrast in quality and in production:

ka	ke	'i	ŋo	ju
'missed'	'my word'	'whew!'	'mind out!'	'shoo!'
ŋa:	ŋe:	ŋi:	ko:	yu:(w)
'yes'	'yes'	'there'	'I forgot'	'absent'.

Contrast is clear in closed syllables:

rak	tep	tip	tok	tut
'erect'	'silence!'	'liver'	'cat'	'4-pronged spear'
ra:k	re:k	pi:p	ko:p	tu:k
'place'	'give'	'mud'	'all'	'slide'.

Contrast occurs in closed syllables with sequences of consonants:

ka:nt	we:nt	wi:nt	ko:nt	mu:nt
'a scratch'	'silly'	'protect'	'to fast'	'tie up'
		(kun)		
want	kent	pi(:)nt	wont	punt
'call out'	'hunt'	'lower back'	'to fall'	'arm'.

Contrast has been found in open syllables:

ka:la	ko:pe	ŋali	po:ro	ka:pu
'uncle'	'wait'	we-2 exc'	'black duck'	'carry in arm-pit'.

Inter-consonantal contrast is adequate in two-syllabled words:

nampi	penta	tinka	koŋke	kuñja
'emu'	'with rod'	'with wax'	'copulate'	'cold'.

(b) Vowels contrast fully in quality and length:

mal	ŋey	nip	noŋ	mul
'bat'	'what's that'	'you two'	'move'	'tail'
ma:l	ŋe:y	ŋi:p	mo:ŋ	mu:l
'slow'	'listen'	'over there'	'very many'	'white paint'
pañ	rep	yik	koñ	puy
'pull out'	'sneak in'	'talk'	'behind'	'go!'
pa:ñ	re:k	yi:k[1]	yo:ñ	pu:y
'cry'	'give'	'talking'	'today'	'crab'
tak	tep	tit	kop	tut
'leave it'	'silence!'	'firelight'	'under'	'pluck'
ta:k	te:p	ti:t	ko:p	tu:t
'gather up'	'excrete'	'porpoise'	'all'	'crawl'.

[1] Accepting 'length' as a valid contrast between 'speak' and 'keep on speaking'.

(c). Contrast in final syllables

A two-way contrast only, occurs in final unstressed syllables; |CVCn̥| - |CVCən|.[1] One alternative is to consider the [ə] as an allophone of /i/ and /u/. This makes for consistency when comparing words of the pattern, |CVCər|.

Unstressed final syllables[2]

Words of single morpheme contrast inadequately:

ŋerŋkan	(ilnen)	rirmpirmpin	pornton	koɽ̃uŋkun
'yesterday'	'from above'	'a lizard'	'skirt'	'after'
(wantan)	3	wantin	(wimuŋkon)	munjun
'where to?'		'emu-bone'	'nothing'	'heavy'
pinpan		penpin	to:npon	putpun[4]
'mullet'		'broad'	'Jew-fish'	'on top'
		tiŋkin		kaɽ̃mun
		'sapling'		'year before'
		ŋetin	(ŋoton)	okun
		'grandpa'	'son'	'maybe'.

---

[1] In spite of a five-way contrast in final stressed syllables.

[2] In unstressed final syllables, /i/, /a/ and /u/ particularly, are shva-like vocoids, sometimes extremely centralised to the point of being unrecognisable. Refer back to (c).

[3] /e/ lacks evidence.

[4] Vowel harmony exists; see diagram below on next page.

Vocoids in unstressed syllables

The second vocoid of two-syllabled words often tends to be phonetically conditioned by the first vocoid. Vowel harmony also affects transitional vowels separating consonants of dissimilar points of articulation. Front vowels frequently produce the front vowel /i/ in a following syllable, back vowels the back vowel /u/, and central vowels, the central [ə].

Vowel harmony in unstressed syllables

First syllable	Second syllable
i] e	i
a	ə
o] u	u

(Table 18)

The present analysis attempts to trace unstressed vowels to their phonemic norm and not to set up a phone /ə/ to cover the shva-like vocoids of final unstressed syllables.[1] The following pair of words shows a significant contrast in length, which, (together with stress on the second morpheme,) serves to distinguish the two:[2]

e.g. / (ŋat) 'pipin / / 'pi:'p-in /
'perch (fish)' 'in the mud'.

[1] Less difficulty has been found with the more rare /e/ and /o/.

[2] No example has yet been found to invalidate the five-way phoneme pattern (each, long or short).

(d) Words comprising more than one morpheme[1]

These words show analogous contrast:

ri:tjan	menjen	tu:tin	to:mpon	ku:mpun
'make go'	'in a well'	'make crawl'	'in smoke'	'in deep water'
wa:ɾ̃an	me:ren	warin		warum
'poor chap'	'show'	'chase'		'swinging'
ɻte:rkan	re:npen	turpin	ilopon	kunanpun
'cause-return'	'descend'	'knock down'	'from below'	'report, tell'
matan		ŋetin	ŋoton	mutun
'make fast'		'grandad'	'son'	'on back'
ŋuman	me:r-kolen	tukin	repon	mu:ŋkun
'approach'	'taipan'	'make level'	'steal, hide'	'eat-it'
ŋañjnan	ilnen	wa:nin	(yu:r)moŋon	kamun
'for us'	'from above'	'brother!'	'busy'	'grandad'.

---

[1] Each morpheme has its own accent and vocoids are thus distinct.

(e) Stressed medial/final syllables

Some contrast has been found in compound words:

i:ř-kaw		ŋaw-in'n	i:ř-koř	i:ř-kuw
'go east'		'this here'	'go beyond'	'go west'
	l			
paluwan		palipan	ilopon	palawun
'from west'		'from S. bank'	'come from below'	'come from east'

ta:w-kan	ka:l-ŋe:m	man-min	me:r-kole	ka:l-kuřj
'hightide'	'remember'	'thirsty'	'taipan'	'wintry'
me:r-kanam	wa:l-merem	me:r-pil	me:r-ɔork	me:r-purŋm
'old'	'know'	'eye-area'	'Venus'	'blunt'
ta:w-pan	ka:l-weřke	ko:w-mi:ŋ	i:ruŋkař-op	ŋe:ŋk-u:l
'vomit food'	'big groper'	'face'	'go N to R.'	'angry'
ka:l-wařamr	rilamotmeren	ko:w-pi:nt	wo:jořm	kirk-muřk
'get worse'	'mouse'	'nose-bone'	'legend'	'western spear'
in'n-aka	in'n-eman	lern-rirkm	pali:pařop	in'nuŋun
'this here'	'from here'	'show'	'Come from river S.'	'to here'.

(f) Contrast before /r/

The presentation of these contrasts will be first in monosyllables for CVr, CVrC and CVrCC, then initially in two-syllabled words for CVrVC, CVrCV and CVrCVC, and finally in two-syllabled words, for CVCVr (CVCr) and CVCCVr (CVCCr).

---

[1] Evidence for /e/ is less common.

Monosyllables

In CVr, contrast is clear among the five vowels:

			'lean over'	
ka:r	me:r	ti:r	wo:k	pur
'not want'	'eye'	'pubic hair'	por 'bruise'	'push'.

In the CVrC pattern, contrast is effective:

ka:rt	perp	pirk	pork	purt
'don't want!'	'build'	'hit(stick)'	'big'	'pass wind'
pa:rn	te:rŋ	pi:rn	ko:rn	pu:rŋ
'lily root'	'strike'	'horse-fly'	'mangrove'	'blocked'.

Examples are lacking for /a/ in the CVrCC pattern, and /e/ and /u/ require two-syllabled words for supporting contrast:

kermper	pirmp	kornt	ku:rmp(ur)
'flesh'	'float'	'flying-fox'	'wash (boat)'
termp	tirmp	po:rmp	tu:rmp
'salty'	'salmon'	'tip out'	'stick'.

Two-syllabled words - first syllable

In the CVrVC pattern, examples are sporadic:

ma:ra	me:ren	miri	po:ro	yu:ru
'bro-in-law'	'show'	'sunset'	'black duck'	'empty-handed'

ma:rar
'brother-in-law'.

In CVrCV pattern, only /a/ is lacking:

merta	pirka	rorko	turma
'shark'	'big, fat'	'wife'	'together'.

For the CVrCVC pattern, contrast is lacking also for /a/:

(ma:rar)	permin	tirmin	ŋorŋur	purŋum
'bro-in-law'	'turtle'	'go dn hill'	'dirty'	'blocked'
(warum)	terpin	rirp-m	torkoř	kurpun
'swinging'	'beef-ants'	'came out'	'tall'	'flea'.

Two-syllabled words - second syllable

Before /r/, single short vowels are usually completely retroflexed (/e/ and /o/ partly so), and the long or double vowel phonemes are usually retroflexed in the second half (see above).

The pattern CVCVr shows adequate contrast:

ka:lar	teler	kal-r	kolor	ŋalur
'fa-in-law'	'uterus'	'carried'	'peace-dove'	'only us two'
ŋapar	meper(-)	kapir	kotpor	wapur
'slice'	'(shdr)blade'	'moon'	'cut, scar'	'stingray'
maŋar	(ŋeneř)	maŋ(i)r	meŋor	manur
'distant'	'what?'	'several'	'shade'	'silence'

witir
'water-snake'.

The pattern CVC.CVr demonstrates clear contrast:

munkar	nanter	perp(i)r	porpur	(yermpur)
'TI/pigeon'	'thronged'	'flood'	'soft'	'spreads'

yaŋkar 'leg-calf'.

Identification of unstressed vowels is not always certain owing to the centering and retroflexion of the vocoids, especially /i/ and /u/ before /r/.[1]

The pattern CVCr contrasts analogously:

takr	te:pr	tipr	mokr	mu:kr
'left it'	'tongue'	'wet, damp'	'aunt'	'invite'
rakr	re:kr	yikr	rokr	ru:kr
'erect'	'gave'	'spoke'	'entered'	'adzed'
ta:tr	metr	titr	totr	tutr
'burn'	'to level'	'sm. turtle'	'passed by'	'plucked'
pajr	mepr	pi:jr	wo:jr	mujr
'arose'	'hot'	'burst'	'jabber'	'refuse'
pa:ɾ̃r	ŋe:yr	piɾ̃r	wok(u)r	pu:ɾ̃r
'wept'	'knew'	'snatched'	'Emu-chick'	'put down'.

The pattern CVCCr shows contrast but with few examples:

katpr	kerpr	rirkr	kotpr	kutjr
'grabbed'	'finished'	'shell'	'slash'	'go outside'
ka:mpr	perpr	rirpr	porpr	kuŋkr
'cooked'	'flood'	'emerged	'soft'	'splashed'.

The five vowel qualities cited above (in 5.1.4.2) contrast clearly in certain environments, particularly in stressed syllables. In unstressed syllables, contrast is often hard to establish.

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[1] And centering before /-n/.

5.1.4.3 Vowel Allophones

Submembers of the phonemic oral resonants are caused by various conditioning factors:

Stressed/unstressed nature of the syllable
Contiguity to nasals/non-nasals
Contiguity to bilabials/others
Presence/absence of following /r/[1]
Presence/absence of following /n/
Position before/after /y/ [2]
Shortness/length of the vocoid.[3]

Certain universal variables modify the quality of the T̲a:yor̃ vowels.

Tongue level
Position of the 'active' part of the tongue
Rounding/unrounding of the lips
Oral/nasal cavity selection by the velic
Contour and rigidity of the tongue (muscles)
Throat tensity.

Mutual conditioning of vowels and consonants varies according to the points of articulation of the contiguous consonant allophones.[4] Some consonant phonemes may themselves function as vowels in nuclear slots of the syllable.[5]

---

[1] Retroflexion is a dominant factor in Thaayorr, so much so, that the number of segments is sometimes uncertain:
e.g. [kʰịṛḳʰ] or [ḳʰṛ:ḳʰ] 'spear'; see p. 67, footnote 4.

[2] /a/ before a /j/ may sometimes become a glide because of the palatal element in [ty]: e.g. ['ŋɑ̯nɑ̯mɑᴵ ty̯ɪm-ɑkʰ] 'to old Dad'.

[3] Are they diphthongs, two V-segments or V + semi-V ?

[4] Section 5.1.3.3; notice pertinent contrast high-front/others.

[5] Section 5.1.5: nasals n amd m and retroflexed continuant /r/.

Allophonic variation in vowels

Vowels are often affected by environmental factors. These are specified below: (Table 19)

Environment causing potential variation	Phoneme /i/	/e/	/a/	/o/	/u/
Before /r/ unstressed	[i˞]	[ɛ˞]	[ɑ˞]	[o˞]	[ʊ˞]
Before /r/ stressed	[i˞]	[ɛ˞]	[ʌ˞]	[o˞]	[ʊ˞]
Contiguous to nasals	[i̯]	[ɛ̯]	[ɑ̯]	[o̯]	[ʊ̯]
Contiguous to bilabials	[I]	[ɛ^{v}] [ae^{ʌ}]	[ɑ]	[o^{v}] [ɔ^{ʌ}]	[ʊ]
Before /n/ stressed	[I]	[ɛ]	[ɑ]	[o]	[ʊ]
Before /n/ unstressed	[I˃]	[ɛ]	[ə^{v}]	[o]	[ʊ˂]
Before /y/	[I]	[e]	[ɑ]	[o]	[ʊ]
Lengthened	[II] [Iy] [II˃]	[ɛɛ˃]	[ɑɑ^{ʌ}]	[oo˂]	[ʊʊ] [ʊw]
Elsewhere (the norm)	[I]	[ɛ]	[ɑ]	[o]	[ʊ]

The allophonic range of variation of the five vowels is:

		Front Unrounded	Front Rounded	Central Unrounded	Central Rounded	Back Unrounded	Back Rounded
High	Close						
	Open	I	I˃				ʊ˂ ʊ
Mid	Close	e	e˃	ə			o˂ o
	Open	ɛ	ɛ˃	ʌ			ɔ˂ʌ ɔ^{ʌ}
Low	Close	ae		ʌv			ɔ
	Open			ɑ			ɒ

Description of the vowel allophones

The Ta:yoɾ̃ vowel phonemes are:

/i/ /i:/ /e/ /e:/ /a/ /a:/ /o/ /o:/ /u/ /u:/.

Of the five short vowels, three become centralised in unstressed syllables, before and after front consonants:

These shva-like vocoids are common in multi-syllabled words and may have the colour of their phonemic norm, but it is difficult to say which |V| is represented by merely phonetic evidence: [1]

S.S.S

/a/	['naŋə^{v}nam]	/naŋanam/	'mother'
	['naŋə^{v}nIp]	/naŋanip/	'father'
	['pInə^{v}lam]	/pinalam/	'three'
	['wa:lə^{v}ŋkiɾ̣]	/wa:laŋkir/	'death-adder'
	['pInə^{v}lma]	/pinalma/	'for three (days)'
	['maŋ^{ə}maŋə^{v}l]	/maŋmaŋal/	'happy'
	['yokunmə^{v}n]	/yokunman/	'this kind'
/i/	['tontə$^{<}$ntam]	/tontintam/	'only one person'
	['wantə$^{<}$npa:nt]	/wantinpa:nt/	'Archilles tendon'
	['tintə$^{<}$npa:nt]	/tintinpa:nt/	'rainbow'
	['ŋañj$^{ə<}$nuɾ̃]	/ŋañj(i)nuɾ̃/	'we (exc) only'
	['nɛntə$^{<}$tə$^{<}$n]	/nentitin/	'grandson'
	['ŋañj$^{ə<}$nan]	/ŋañj(i)nan/	'for us (exc)'
	['ŋamp$^{ə<}$lIn]	/ŋamp(i)lin/	'belong to us (inc)'
/u/	['kumə$^{>}$nput]	/kumunput/	'big leg'
	['kumə$^{>}$nintɑ̰]	/kumuninta/	'a lizard'.

[1] Related words and derivatives sometimes assist.

Two suspected cases are recorded for the phoneme /e/:

/e/	['ŋɛt̲ə˂ñə˃m]	/ŋet̲eñim/	'fa-in-law'
	['mɛlnkə˂lnkɑr̃]	/melnkelnkar̃/	'tomorrow'.

The shva-like vocoids occur with /a/, /i/ and /u/, mainly, and only in unstressed closed syllables bordered by alveolars.

The allophones of the short vowel phonemes are:

/e/ = [ɛ] ~ [ɛ^{v}] ~ [ɛ˃] ~ [ɛ̝] ~ [e]
/i/ = [ɪ] ~ [ɪ˃] ~ [ə˂] ~ [ɪ̞]
/a/ = [ɑ] ~ [ʌ] ~ [ae˃] ~ [ʌ^{v}] ~ [ə^{v}] ~ [ɑ̝]
/o/ = [o] ~ [o˂] ~ [ɔ^{ʌ}˂] ~ [o̝]
/u/ = [ʊ] ~ [ʊ˂] ~ [ə˃] ~ [ʊ̝].

In stressed syllables, the vowels may vary up or down a little in the vocoid scale according to the context.

/e/ = [e] when preceding /y/:

[wɛ̣rkeyɐ̣˂ṛ]	/werkeyir/	'rubbed himself'
[kɑtpeyɐ̣˂ṛ]	/katpeyir/	'touched himself';

= [ɛ^{v}] when contiguous to bilabials in stressed syllables and when front (alveolar) consonants close the syllable:

[mɪn̲ nɛ^{v}:mp]	/min̲ ne:mp/	'galah'
[mɪn̲ mɛ^{v}pị˃ṛt̲]	/min̲ mepirt̲/	'policeman bird'
[pɛ^{v}tn]	/petn/	'skin, bark'
[pɛ^{v}tpɪ˃n]	/petpin]	'quick';

= [ɛ˃] before /r/ in closed syllables as in |Cer-|, |CerC-| or |CerCC| comprising short stressed |V| and unreleased stop after /r/:

[pɛ̣˃ṛp]	/perp/	'build'
[n̲ɛ̣˃ṛp]	/n̲erp/	'pulse'
[ŋɑt^{ə}ŋɛ̣˃ṛp]	/ŋat ŋerp/	'fresh-water sardine'

[pɛ̣˃ṛṭ]	/pert/	'shoulder'
[t̲ɛ̣˃ṛk̇]	/t̲erk/	'lazy'
[t̲ɛ̣˃ṛp]	/t̲erp/	'fast, quick'
[ṛɛ̣˃ṛm]	/rerm/	'plain'
[t̲ɛlɛ̣˃ṛ]	/t̲eler/	'uterus'
[wɛ̣˃ ṛŋk]	/werŋk/	'peep'
['n̲ɑn̲tɛ̣˃ṛ]	/n̲an̲ter/	'join, crowd in'
['t̲ɑmɛ̣˃ṛ]	/t̲amer/	'lame';

= [ɛ̨] following nasals, more noticeably in long vowels;

[ŋɛ̨:]	/ŋe:/	'yes'
[ŋɛ̨y]	/ŋey/	'hey!'
[ŋɛ̨]	/ŋe/	'what's that?'
[ŋɛ̨:m]	/ŋe:m/	'listen'
[mɛ̨ñj]	/meñj/	'well'
[mɪ̨n̲ n̲ɛ̨mp]	/min̲ n̲emp/	'galah'
[n̲ɛ̨ṛŋk]	/n̲erŋk/	'son';

= [ɛ] elsewhere.

/i/ = [I˃] in unstressed syllables before [ṛ] and [n] after front vowels:

[kɑt̲I˃n]	/kat̲in/	'yamstick'
[n̲ɛmI˃n]	/n̲emin/	'from here'
[kɑpɪ̣˃ṛ]	/kapir/	'moon'
[ṛI:tɪ̣˃ṛ]	/pi:tir/	'keeping it'
[pɑ:t̲ɪ̣˃ṛ]	/pa:t̲ir/	'biting'
[pɑjɪ̣˃ṛ]	/pajir/	'(sun) rose'
[mɑŋɪ̣˃ṛ]	/maŋir/	'several'
[t̲It̲ɪ̣˃ṛ]	/t̲it̲ir/	'turtle'
[ṛɑt̲ɪ̣˃ṛ]	/rat̲ir/	'breaking stick noise'
[ṛɪ̣yɪ̣˃ṛ]	/riyir/	'mangrove'
[t̲ɑtɪ̣˃ṛ]	/t̲atir/	'frog'.

Also in long vowels, the length may have two pulses, the first mora being the pulse and the second a glide, which is a re-articulation in a centralised position, or even a semi-vowel; that is [II], [II$^{>}$] or [Iy] :

[r̤I̤I̤$^{>}$tj]	/ri:tj/	'run'
[mI̲n̲ pI:njIl]	/mi̲n̲ pi:njil/	'crocodile (agt)'
[r̤I̤ytj]	/ri:tj/	'run'.

/i/ = [ə$^{<}$] in unstressed word-final closed syllables after /a/, but not before /r̃/ :

[pɑmə$^{<}$t̲]	/pam-t̲/	'the man'
[t̲ɑ:t̲ə$^{<}$n]	/t̲a:t̲in/	'breast'
[t̲ɑmə̤$^{<}$r̤]	/t̲amir/	'lame'
[wɑ:n̲ə$^{<}$n]	/wa:n̲in]	'brother';

= [I̤] when preceded by nasals:

[mI̤:ŋ]	/mi:ŋ/	'daylight'
[mI̤n̲]	/mi̲n̲/	'creature'
[ŋI̤:]	/ŋi:/	'over there'
[n̲I̤:n]	/n̲i:n/	'sit'
[mI̤nŋ]	/minŋ/	'frightened'
[mI̤mp]	/mimp/	'bed';

= [e$^{\Lambda}$] following nasals in stressed syllables:

[n̲e:$^{\Lambda}$n]	/n̲i:n/	'sit'
[me$^{\Lambda}$ʔe$^{\Lambda}$]	/mi'i/	'pick (it) up';

= [I] elsewhere.

/a/ = [ʌ(v)] in closed syllables, especially when a contrast in length of the vowel occurs:

[kʌk]	/-kak/	'with'
[wʌŋ]	/waŋ/	'devil, white man'
[n̲ʌn]	/n̲an/	'sand'
[lʌk]	/lak/	'speared'
[t̲ʌt]	/t̲at/	'speared'
[wʌt]	/wat/	'bark (tree)';

= [æ˃] in stressed word-initial syllables beginning with /r/ and ending with a front contoid:

[mɪ̱n ræ˃pʊlp]	/mi̱n repulp/	'elusive bird with black head'
[mɪ̱n ræ˃t̲ɪ˃lk]	/mi̱n re̱tilk/	'frilled Jew-lizard';

= [ə^{v}] in closed unstressed medial syllables:

[wɑn̲tə^{v}n̲tɑr̃]	/wan̲tan̲tar̃/	'what about?';

= [ɑ̨] after nasals:

[ŋɑnʌ̨^{v}m]	/ŋanam/	'mother'
[mɑ̨ŋʌ̨^{v}r̥]	/maŋar/	'distant, small'
[n̲ɑ̨n]	/n̲an/	'sand';

= [ɑ] elsewhere.

/o/ = [o˂] in unstressed closed syllables:

[mɪ̱n kolo̥˂r̥]	/mi̱n kolor/	'peaceful dove'
[mɛŋo˂r̥]	/meŋor/	'shade'
[roŋo˂m]	/roŋom/	'rainy'
[ko̥r̥o˂n]	/koron/	'milky pine';

Also /o/ = [o$^{<}$] as a transitional vocoid between syllables bounded by contoids having different points of articulation, when /o/ occurs in the first stressed syllable of the word:

[kol$^{o<}$kɛ]	/kol-ke/	'stone scraper'
[ŋok$^{o<}$ t̪ɐrmp]	/ŋok t̪ermp/	'salty water'
[wo̤rk$^{o<}$ lom]	/work-lom/	'sword-fish';

= [ɔ$^{\Lambda}$] contiguous to bilabials:

[kʊtʌ mIn̪ t̪ɔ$^{\Lambda}$p]	/kuta min̪ t̪op/	'good hunting dog'
[mIn̪ mɔ$^{\Lambda}$p$^{o<}$ŋʊn̪]	/min̪ mopŋun̪/	'black swan'
[ŋɔ$^{\Lambda}$mpo̤r]	/ŋompor/	'brown snake'
[yɑk$^{\ominus}$ɮɔ$^{\Lambda}$l]	/yak pol/	'brown snake';

= [o̤] following nasals:

[mo̤:ŋ]	/mo:ŋ/	'very many'
[ŋo̤:p]	/ŋo:p/	'dog tick'
[ŋo̤k]	/ŋok/	'water, liquid'
[ŋo̤]	/ŋo/	'look out, something falling!'
[n̪o̤ŋ]	/n̪oŋ/	'to move'
[ŋo̤ŋko̤m]	/ŋoŋkom/	'to not see, ignore';

= [o$^{\Lambda}$] after backed contoids:

[ko$^{\Lambda}$kɑnp]	/kokanp/	'before, previously'
[ko̤$^{\Lambda}$r̤kõr̃]	/korkõr̃/	'fig tree'
[ko$^{\Lambda}$ŋkʊlm]	/koŋkulm/	'hand-bag';

= [o] elsewhere.

/u/ = [ʊ˂] in unstressed syllables, usually word-final before /r/ and /n/ and when a back vowel occurs in the stressed initial syllable:

[ŋan mokʊ˂r]	/ŋan mok(u)r/	'aunty'
[nʊlʊ˂r]	/nulur/	'he alone'
[ŋat wapʊ˂r]	/ŋat wapur/	'stingray'
[yokʊ˂n]	/(y)okun/	'perhaps';

= [ʊ^{v}] when low-open vowels occur following:

[pʊ^{v}:pa^m]	/pu:pam/	'vine in wallaby dance'
[yʊ^{v}pa^r̃]	/yupar̃/	'wasting time'
[rʊ^{v}wan]	/ruwan/	'cause to meet'
[ŋʊ^{v}la^r]	/ŋular/	'quickly, hurry up!';

= [e˃] in unstressed closed syllables, usually word-finally, following /a/ in the initial stressed syllable:

['yawe˃n]	/yawun/	'open space, gap'
['tame˃r]	/tamur/	'foot'
['ŋaye˃r]	/ŋayur/	'I alone'
['napə˃n]	/napun/	'egg';

= [ʊ̨] following nasals;

[mʊ̨n]	/mun/	'call'
[mʊ̨:ŋk]	/m̈u:ŋk/	'eat, drink'
[nʊ̨:mp]	/nu:mp/	'wipe, clean'
[mʊ̨nk]	/munk/	'patch of bush'
[nʊ̨ŋʊ̨n]	/nuŋun/	'for him';

= [ʊ] elsewhere.

Summary of special conditioning factors

(i) Retroflexion of all vocoids occurs before [ɽ] /r/.

(ii) Vocoids between velars are farther back in the oral cavity.

(iii) Vowels in unstressed word-final syllables all share centralisation, but in varying degrees.

(iv) Phonetic norms are found only by contrast, ultimately.

(v) Vowel harmony is a feature of Thaayorr phonology in multi-syllabic words.

(vi) Transitional vocoids between contoids also harmonise:

e.g.	['wo̤ɽk^{o}lom]	/worklom/	'swordfish'
	['kol^{o}kɛ]	/kolke/	'flat scraper'.

5.1.4.4 Distribution of v o w e l s

The number of syllables is equal to the number of vowels.[1] Two vowels may not occur in sequence within a word. If they should tend to do so through suffixation, a (transitional) consonant will appear between them. For example:

/Malriyu-t-an/ 'at Malriyu' where /-t-/ is a focus article.
/na:(w)-r/ 'saw' where the [w] is transitional.[2]
/te:rŋ-e(y)-r/ 'hit himself' where [y] is transitional.[2]

Phonologically conditioned, these contoids shape the allomorphs.

The most common vowel phonemes are /a/, /u/ and /i/.[3] The least common are /e:/ and /o:/. The few restrictions to word-initial consonants preceding them are presented in the chart of computerised statistics (5.1.5). Long vowels (except /a:/) are less common in occurrence as syllable nuclei (5.1.4.5) and occur only morpheme-initially in stressed syllables.

V_1 may often be elided together with C_1 in normal fast speech-flow.[4] When the same vowel both ends and begins two adjacent words, they may be fused together into a long vowel in the absence of a pause.[5] Remnants of a pronoun may be suffixed to a verb in such a way that a consonant functions as a V-nucleus:

e.g. /te:r.ŋ-r.y-un/ 'I hit him' reduced from /te:r.ŋ-r ŋay nun/.

---

[1] Apart from those where a consonant functions as syllable nucleus: e.g. /rirkr/ 'get up, arise'; /rir.k-r/.

[2] And the /r/ functions as a syllable nucleus.

[3] See 5.1.4.5.

[4] See Elision in 5.1.3.4.

[5] So too, between root and bound morpheme.

5.1.4.5 Frequency of vowels

Statistical frequency analysis by computer gave the following count for Ta:yoɾ̃ vowels:[1]

(Table 20)

Order	Phoneme	Occurrences	%-age in the text
1	/a/	1303	36 %
2	/u/	735	20
3	/i/	432	12
4	/a:/	200	5 %
5	/e/	199	5
6	/o/	196	5
7	/i:/	189	5
8	/u:/	137	3 %
9	/e:/	82	2 %
10	/o:/	60	1

Total number of vowels in the corpus = 3533 (cf 6832 consonants)
Vowels compared to consonants = 51.71 %
Consonants compared to vowels = 193.38 %
Vowels compared to all phones = 34.08 %
Consonants compared to all phones = 65.9 %.

Thus, vowels comprise about one third of all phonemes and consonants comprise two thirds of all phonemes, being about twice as numerous as the vowels. Many consonants are elided, but not many vowels.

[1] Program A for the corpus of 2345 words.

5.1.5 Syllable structure

5.1.5.0 The structure of the Ta:yoř syllable is relatively diverse. Several factors affect the nucleus of the syllable in this non-tonal Aboriginal vernacular:

loudness
duration
pitch
segmentation
C-C constituency.

By the interpretation of numerous univalent words, only word-initial syllables are potentially V-initial; all other syllables are C-initial. Several criteria served to distinguish the emic syllable:

contrast
timing
stress
pattern
symmetry,

e.g. in syllable-shapes like |V'V| and |CV'V| /(ŋ)i.'i/ 'here'
or: /CVCCC/ ~ |CVC.CV| /rirkr/ 'do'[1] |CVCCC| /pormp/ 'vomit'.

The study of speech samples with mechanical aids (see 5.1.7.5) showed that there is more than mere subjective choice in distinguishing pairs such as these:[2]

e.g. /ŋin'n/ 'this (one)' /mi:n.ŋr/ 'fears'
/petn/ 'skin' /na:.t-n/ 'can see'
/ŋotn/ 'black' /ŋo:ton/ 'son, child'.[3]

---

[1] In which /r/ functions as a vowel.

[2] See section 5.1.7.6.

[3] Cf. /wunp/ 'put' |CVCC| and /wu.nr/ 'recline' |CV.CV|. The Ta:yoř syllable is the most convenient framework for studying the distribution of phonemes.

5.1.5.1 Emic syllable types

The basic univalent syllabeme in Ta:yoɾ̃ is the vowel, with an optional initial consonant-margin. From one to three consonants may follow the vowel in codal sequence thus:

V VC VCC VCCC / CV CVC CVCC CVCCC which may be condensed as (C)V(C)(C)(C).

Informants use the syllable as a single unit of prominence in which each vowel phoneme is a nucleus.[1] In addition to the slope before the nucleus, syllables have a final slope and coda after the nuclear centre.[2]

Borders are often fused and syllable breaks ambiguous:

e.g. /ŋamal/ 'big' ['ŋam.mal][3]; the intervocalic consonant has merely phonetic length, being in double function.

The centre of the syllable is filled by a vocoid.[4] This syllabic nucleus is a peak of maximum sonority.[5] It is the diaphragm which helps to unify the syllables, facilitating the emission of the eight pulse-shapes by contraction.[6]

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1 K.L.Pike. Phonemics, 1947, 90.

2 See section 5.1.7.5.

3 Cf. /biting/ ['baItIŋ] ~ [baIt.tIŋ]. Any attempt to slow down an informant usually fails to separate out the syllable effectively for an alien listener.

4 Or syllabic contoid such as m, n, r or y.

5 See section 5.1.7.5.

6 R.H.Stetson. Bases of phonology. Ohio: Obelin, 1945, 57.

5.1.5.2 Syllable types

The eight emic syllables are:

V

e: 'oh yes' i: 'over there'

VC

it 'that (there)' a' 'what's up?' iř 'oh!'

i:p 'they're mine!'

VCC

int 'this (here)' in' 'this' ulp 'that (one)'

VCCC

in'n [1] 'this here' [2]

. . . . . .

CV

yi: 'oh dear!' ŋe: 'yes' ko: 'oh, I forgot'

CVC

mut 'back' wa:l 'silly' til 'again'

ra:t 'cut, chop' ni:n 'sit' wuw 'meet'

CVCC

terk 'lazy' pent 'fishing-rod' rump 'beach'

tunp 'throw' pirk 'hit' wont 'fall'

CVCCC

pirŋk 'a fish' nerŋk 'son' termp 'salty'

yermp 'to spread' pormp 'tip out' werŋk 'to peep'.

---

[1] Emic syllable division does not always coincide with borders between chest pulses. This is a phonetic doublet.
cf. m'm and a'a in English.

[2] Many of these words occur with an occasional (dialectal) word-initial consonant /ŋ-/.

5.1.5.3 Allo-syllables

The phonemes /n/, /m/, /r/ and /y/ sometimes function like vowels in the nuclear slot of syllables. They are not full univalent types like the eight basic syllables, but diverge from the pattern. They are written thus: e.g. |(C)r̥|.[1]

The continuants listed above are more 'syllabic' than those of the transitional vocoid + stop [-V-t] transcribed as /-t/.[2] They are considered sufficiently syllabic to be treated as syllable nuclei in this thesis. The following examples show that such allo-syllables are phonetically syllabic, but also structurally parallel to vowel phonemes which occupy the nuclear slot of syllables:

e.g. /'muŋ.k-n̥ / 'can eat' |CVC.CV| syllabic n̥
/'tan.p-m̥/ 'pushed' |CVC.CV| syllabic m̥
/werŋ.k-r/ 'peeped' |CVCC.CV| syllabic r̥
[3]/'te:r.ŋ-r(r)-y/ 'I hit' |CVC.CV.(C)V| r̥ and y̥.

A syllabic liquid also occurs frequently: [4]

e.g. /'in.t-l/ 'this (erg.)' |VC.CV| syllabic l̥.

The syllabic [-V+t] written /-t/ is common: [5]

e.g. /'ul.p-t/ 'that one' |VC.CV| syllabic [-^{V}t̥].

---

[1] Many extra (phonetic) syllables intrude into speech utterances, but they are not normally written; except for some allomorphic shapes to be described later.

[2] See section 5.2.4 and also 5.2.5, for aspect marker, /-p/.

[3] The [-r:-] is phonetically in double function as |V + C|.

[4] Ergative suffix; see section 5.2.1.

[5] Suffixial focus marker listed in 5.2.5.

5.1.5.4 Distribution of syllabemes

The study of word-structure in section 5.1.6.2 manifests the way in which different syllables may occur in different syllable-slots of Thaayorr words.

The behaviour of syllables is regular. All eight syllable types may occur in monosyllables, but V-initial syllables are scarce, VCCC being present in only one word. The possibility that it is two syllables has been considered. If so, it would be written / in.'n / 'this' |VC.CV| with syllabic [n̩], a nasal. However, the present interpretation is adopted as being more consistent with pattern symmetry.

Vowel-initial syllables are found only word-initially, and in some cases, (dependent on idiolect and dialect), an initial consonant may be heard.[1] They have extensive limitations of occurrence, being found word-initially only in from one to three-syllabled words (also lacking for VCCC). Only V- may occur word-initially in four-syllabled words.

Consonant-initial syllables occur without much restriction, except that CVCC and CVCCC tend not to be found in longer words. CVCC may occur initially, medially and finally, in almost all word-shapes. Word-finally in longer words, it is generated only by the addition of monophonemic suffixes.[2]

A chart illustrating word-structure also gives detailed distribution of syllables in this language.[3]

---

[1] The phoneme /ŋ-/.

[2] An alternative treatment of this morpheme gives it syllabic status, e.g. [-n̩] or |-Vn| : see 5.1.5.3, footnote 3.

[3] See section 5.1.6.3.

5.1.5.5 Computer statistics

The corpus of 2345 words was processed according to programme A.[1] The total number of vowels in this count was given also as the number of syllables, 3533 (syllables). Thus, the average number of syllables per word is 1.50.[2]

The number of syllables per word is:

One syllabled words	1388 words	59 %
Two " "	752 "	32
Three " "	173 "	7
Four " "	29 "	1
Five " "	0 "	0
Six[3] " "	1 "	0 .

The following pages show computer statistics for CV and VC sequences of phonemes processed in the corpus.[4]

---

[1] See section 4.3. Slight fluctuation in the number of words in different programmes is dependent on the interpretation of hyphens, and the purpose of each programme.

[2] This does not take note of syllables where the nucleus is a syllabic consonant. See section 5.1.5.3 for examples of contoids functioning as syllable nuclei: /-n/, /-m/, /-r/, /-l/, /-y/, /-t/ and /-p/.

[3] Certain long words may occur in compounds which are generally hyphenated in this thesis.

[4] The restrictions of association between certain vowels and consonants are thought to be significant rather than random, but no general conclusion is postulated.

(a) Common syllable-initial CV-sequences

The CV-sequences found in the corpus are listed below according to their order of frequency:[1]

(Table 21)

Frequency	Cluster	%-age
307	ŋa-	9.3 %
222	ka-	6.7 %
200	ŋu-	6.1
187	nu-	5.7
139	na-	4.2 %
131	pa-	3.9
101	pu-	3.0
85	wa-	2.5 %
74	ya-	2.2
67	ta-	2.0
66	li- ku-	2.0
62	ma-	1.8
61	na-	1.8
60	mi-	1.8
57	pe-	1.7
51	ra:	1.5
48	ti- ri- ko-	1.4
41	-ña-	1.2 %
39	ta-	1.1

[1] Processed by means of programme A.

Frequency	Cluster	%-age
37	pi-	1.1 %
36	te:-	1.0
35	yi	1.0
34	ko:- yu-	1.0
33	yu:- ka:-	1.0
31	wu:- to-	.9
30	ku:- wa:-	.9
29	wu-	.8
25	ni:- pa:-	.7
24	yi:- ni- ja- tu-	.7
23	te- po-	.7
21	ke-	.6
19	na:-	.5
18	ri:- la-	.5
16	ya:- ŋe:- nu-	.4 %
15	ra- me- ki- ři-	.4
14	le- mu-	.4
13	ŋe- yo:-	.3
12	ta:- ji- lu- tu:- mu:-	.3
11	ne- re:- 'i-	.3
10	ŋa:- ŋo- pu:-	.3
8	ře- re- ne- mi:- ro- no-	.2
7	ti:- mo- yo- nu:-	.2
6	we-	.1
5	te- me:- ni- mo:-	.1
4	je- ti- ŋi:- lo- řu-	.1
3	'e- ŋi- wi- 'o- ru-	.0 %
2	ke:- le:- we:- pi:- wi:- to- řo- wo- ro:- no:-	.0
1	ma:- ta:- ña- ye- pe:- ne:- ji:- li:- jo- jo:- lo:- wo:- ju:- ŋu:-	.0

(b) Sequences lacking in the processed text

ja:-	je:-	ju-						
la:-	lu:-							
na:-	ne:-	ni:-	no:-	nu:-				
ña:-	ñe-	ñe:-	ñi-	ñi:-	ño-	ño:-	ñu-	ñu:-
ña:-	ñe:-	ñi:-	ño:-	ñu:-				
to:-								
te:-	ti:-	to:-	tu-	tu:-				
'a:-	'e:-	'i:-	'o:-	'u-	'u:-			

(c) Sequences not found in the corpus, but present in other narratives:

ki:-
no-
ŋo:-
po:-
ru:-
ye:-

'a-[1]

---

1 ye: 'yes, oh yes'
wa'ar 'jelly-fish'
ki:n 'tooth'
po:rmp-r 'vomited'
ru:k 'scrape'
noŋ 'move'
ŋo:p 'dog-tick'

(d) Frequency of VC-sequences (Table 22)

Frequency	Cluster	%-age
363	ul	10.8 %
242	an	7.2
142	aɾ̃	4.2
140	un	4.1
126	al	3.7
99	am	2.9
98	ay	2.9
97	at	2.9
96	ak	2.8
85	aŋ	2.5
72	in	2.1
67	ar	2.0
63	i:ɾ̃	1.8
55	uɾ̃ el	1.6
51	iɾ̃ a:k	1.5
50	ok	1.4
49	ir	1.4
46	añ in	1.3
43	un	1.2
38	e:r at ip	1.1
37	a:t u:m	1.1
33	aw	0.9
31	i:n	.9
30	ik an	.8
29	on	.8
27	o:ɾ̃ a:ɾ̃	.8
26	oŋ (With programme B)	.7
25	i:k	.7
22	i:w em	.6
20	up er	.5
19	a:n ij a:r	.5
18	or i:t uŋ ut	.5
17	uw il ut en	.5
16	u:k it	.4
15	oɾ̃ et ap iñ	.4
14	u:ŋ u:t	.4
13	uk it a:w	.3
12	ur u:j op ot u:n	.3
11	o:p i' a:l	.3
10	u:ɾ̃	.2
9	e:y e:ŋ u:l	.2
8	um om a:n	.2
7	i:l ey	.2
6	u:w en ek et ep	.1
5	a:y o:ŋ i:ŋ e:m e:t e:k e:n	.1
4	eŋ u:r o' eɾ̃ on	.1
3	uñ u:n a:m o:w o:l ej i:p ot e'	.0
2	iŋ e:l uj e:t iy o:m im i:t ol	.0
1	eñ i:n o:r ow i:r e:ɾ̃ oy o:j uy aj o:t a:j o:k i:ñ	.0

(e)[1] Contrast in presence/absence of VC-sequences

	p	t̲	t	j	k	'	l	r̃	r	m	n̲	n	ñ	ŋ	w	y
a	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
a:		+		+	+		+	+	+	+	+	+			+	+
e	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+
e:		+	+		+		+	+	+	+		+		+		+
i	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+
i:	+	+	+		+		+	+	+		+	+	+	+	+	
o	+	+	+		+	+	+	+	+	+	+	+		+	+	+
o:	+		+	+	+		+	+	+	+				+	+	
u	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
u:		+		+	+		+	+	+	+	+	+		+	+	

Presence

Separating out the syllable fragments which do not occur:

	p	t̲	t	j	k	'	l	r̃	r	m	n̲	n	ñ	ŋ	w	y
a						x										
a:	x		x			x							x	x		
e															x	
e:	x			x		x					x		x		x	
i															x	
i:				x		x				x						x
o				x									x			
o:		x				x					x	x	x			x
u						x										
u:	x		x			x							x			x

Absence

[1] By means of programme B.

(f) Initial CV-sequences [1]

(Including prehyphen consonants)

Number of words: = 1716

Word-initial consonants

(Table 23)

Occurrences	Phoneme	%-age
349	/ŋ/	22 %
215	/p/	14
195	/n/	12
189	/k/	12
155	/y/	10 %
114	/t/	7 %
112	/r/	7
96	/w/	6
94	/m/	6
6	/l/	0 %
5	/j/	0
1	/t/	0
1	/n/	0
0	/ñ/	0
0	/'/	0
0	/r̃/	0

[1] From programme D,

(g) Initial CV-sequences [1]
(counting the $-V_1-$)

(Table 24)

Frequency	V-phoneme	Percentage
547	/a/	31 %
347	/u/	20
160	/i/	9
144	/ɑ:/	8
135	/i:/	7
99	/o/	5 %
97	/u:/	5
91	/e/	5
57	/e:/	3
37	/o:/	2

Contrasting the initial V-phoneme of true vowel-initial words;

74	/i:/	40 %
33	/i/	17
33	/o/	17
26	/u/	14
11	/a/	5 %
4	/e:/	2
2	/e/	1
1	/a:/	0 %
0	/o:/	0
0	/u:/	0

[1] By means of programme D.

(h)[1] Relative frequency of word-initial CV-

(Table 25)

Frequency	Sequence	%-age
224	ŋa	14.6 %
112	nu	7.3 %
92	ŋu	6.0
77	ka	5.0
60	pa	3.9
59	pu	3.8
54	ya	3.5
44	ra:	2.8
39	mi na	2.5
35	pe	2.2
32	wa	2.0
27	ri	1.7
26	ta ta:	1.6
25	yi ko:	1.6
24	to yu:	1.5
22	ku:	1.4
21	ka:	1.3
19	wa: wu:	1.2
18	po	1.1
17	pa:	1.1
16	yi: wu	1.0
15	ku yu	.9 %
14	ya: pi ni:	.9
13	ri: ma	.8
12	na:	.7
11	ra	.7
10	ŋe: ko ke me	.6
9	tu: ti ne ŋa:	.5
8	pu: mu: mu te:	.5
7	ki yo: re:	.4
6	ŋo mi: ta:	.3
5	me: we le ti: nu:	.3
4	ŋe mo	.2
3	re ni ro	.1
2	ru ro: ŋi: pi: ke: ji wi:	.1
1	mo: wo ŋi ta: we: ne: le: ji: jo: ŋu: wo: tu nu ju:	.0

[1] By means of programme D.

(i) Contrast in presence/absence of initial CVs

Present

	a	a:	e	e:	i	i:	o	o:	u	u:
p	+	+	+	-	+	+	+	-	+	+
t	+	+	+	+	+	+	+	-	+	+
t		+								
j					+	+		+		+
k	+	+	+	+	+		+	+	+	+
'										
l			+	+						
r̃										
r	+	+	+	+	+	+	+	+	+	-
m	+	-	+	+	+	+	+	+	+	+
n	+	+	+	+	+	+	-	-	+	+
n									+	
ñ										
ŋ	+	+	+	+	+	+	+	-	+	+
w	+	+	+	+	-	+	+	+	+	+
y	+	+	-	-	+	+	-	+	+	+

Absences are reduced by the presence of some elsewhere:[2]

Absent

	a	a:	e	e:	i	i:	o	o:	u	u:
t	x		x	x	x	x	x	x	x	x
j	x	x	x	x			x		x	
'	x	x	x	x	x	x	x	x	x	x
l	x	x			x	x	x	x	x	x
r̃	x	x	x	x	x	x	x	x	x	x
n	x	x	x	x	x	x	x	x		x
ñ	x	x	x	x	x	x	x	x	x	x

[1] By means of programme D.

[2] ŋo:ŋkom 'ignorant' yen 'open' pe:p 'fish-net'
ye:njr 'raffia' ma:k 'trample' wila 'small sister'
noŋ 'move' no:ŋ 'moving' po:l 'brown snake'
ru:k 'scrape' yoy 'oh dear!' to:mp 'smoke'.

5.1.6 W o r d structure

A Thaayorr word is that segment of an utterance bounded by successive points where pausing is possible.[1]

The written word is the minimal free form between spaces which comprises one or more morphemes. As syllables comprise phonemes, so, in the phonological hierarchy, words comprise syllables.[2]

The word is an isolable emic unit in the continuum of speech. It undergoes modification by the intonation, stress and rate of vocal utterance. Distinctive features like type and number of syllables keep 'meanings' apart.

Principles of word structure, which for Ta:yoř is individually characteristic, limit phoneme occurrence.[3] Specific syllable types dominate the ultimate shape of words.[4] Intrinsic syllable type differentiates their word-shape. Division into syllabemes is the end result of identifying the weakest point of initiator pressure or auditory prominence at the supposed syllable border.[5] Univalent cases are the only guide.

Allo-words include a closed class of lexical clitic which will be described in a later study, but is listed in 5.2.1.

---

[1] C.F.Hockett. A course in modern linguistics, 1958, 167.

[2] From phone to phoneme, syllabeme, word, phrase, clause ...

[3] The syllable is more easily repeatable than the phoneme to a native speaker, and the word than a syllable.

[4] Syllables must begin with only (C)V-, never a CC-sequence.

[5] K.L.Pike. Phonemics, 1947, 251 (b).

5.1.6.1 Monosyllables

The following words exemplify the eight emic syllable types listed in 5.1.5.1. Generative lists comprising proved phonemes served to encourage informants to 'recognize' actual Thaayorr words. Vowel-initial words are:

(a) V

e: 'oh yes' i: 'there'

(b) VC

it 'that' a' 'what's that!' iɾ̃ 'oh!' i:p 'it's mine!'

(c) VCC

int 'this' in' 'this' ulp 'that'

(d) VCCC

in'n 'this here' int-l[1] 'this Erg' int-p[1] 'this again',

Consonant-initial words are:

(e) CV

ja 'shut up!'	ji: 'here boy!'	ka 'missed it!'
ke 'oh, my word'	ki: 'look out!'	ko: 'oh, I forgot'
-le 'that's it'	ju 'shoo!'	mi 'oh dear'
ŋa 'listen'	ŋe: 'yes'	ŋi: 'there'
ŋo 'look out!'	ŋe 'what's that?'	ŋa: 'yes'
wo 'hunt there!'	ye: 'oh yes'	yi: 'oh dear'
'i 'whew!'	li: 'torch beam'	ti: 'tea',[2]

---

[1] An alternative description is that these two words manifest the shape |CV.CV| in which V_2 is filled by a syllabic contoid.

[2] As these are almost all exclamatory, the word-final glottal stop so often heard, is interpreted in this work, to be a part of the intonational system and not lexical.

(f) CVC

A sample of words is here presented, others being listed in the full Lexicon at a later stage.

Nouns

kam 'blood'	liŋ 'torch-beam'	may 'food'
nan 'seed'	tip 'liver'	pam 'person, male'
rat 'seed'	ŋo:p 'dog-tick'	wal 'basket'
wu:j 'song'	yal 'creek, groin'	yuk 'tree'

Pronouns

nin 'you (sg)'	nun 'him'	nul 'he, she, it'
nuř 'you (pl)'	ŋal 'we two (inc)'	pul 'they two'

Adjectives

ko:p 'all'	ku:t 'sulky'	kon 'short'
moŋ 'many'	min 'good'	ŋa:j 'full (up)'
raw 'burnt'	top 'fine (hunter)'	wo:k 'leaning'

Miscellaneous

kan 'on top'	ka:r 'don't want'	lup 'in'
ŋul 'later on'	til 'again'	wan 'who?'
yo:ř 'today'	yup 'by and by'	yu:w 'away, absent'

Verb auxiliaries

jiř 'out'	koy 'sing out'	nak 'look!'
pař 'pull (out)'	pu:ř 'place down'	tep 'silence!'
wa:t 'mistake'	wuř 'pull out'	ya:ř 'walk'

Verb stems

kum 'to not see'	ma:k 'press down'	mun 'call, bring'
na:t 'look'	noŋ 'to move'	ŋe:m 'listen'
paj 'get angry'	piř 'snatch away'	ra:t 'cut, chop'
re:k 'give'	tak 'leave (it)'	tut 'pluck, pull'
wak 'follow'	wun 'lie down'	yen 'open'

(g) CVCC

A sample of these is given from the lexicon:

Nouns

kamp 'tracks'	kirk 'spear'	menj 'well'
moln 'ants'	namp 'name'	ne:mp 'galah'
ŋe:ŋk 'stomach'	ŋurp 'water-lily root'	pa:nt 'head'
petn 'skin'	rerm 'flat saltpan'	ruŋk 'hybrid goanna'
taŋk 'pus'	to:mp 'bush-fire smoke'	wu:tp 'storm bird'

Pronouns

nult 'it's he'	nuřt 'it's you(pl)'	ŋamp 'we (inc)'
peln 'they'	ŋ^{w}ant 'it's me!'	yant 'go...you'

Adjectives

kump 'angry'	mant 'small'	ŋotn 'black'
tařn 'solid, firm'	terp 'fast, quick'	we:nt 'silly'

Miscellaneous

ka:rt 'don't want'	maŋk 'low down'	miñj 'really, truly
ri:nj 'cramp'	yořp 'inverted'	yu:wp 'he's away'

Verb particles

puřp 'grab'	purt 'pass wind'	yaŋk 'eating out'

Verb stems

ka:nt 'scratch'	kerp 'finish'	kutj 'go outside'
mi:nŋ 'fear'	mu:ŋk 'eat, drink'	nu:mp 'wipe clean'
patp 'camp, sleep'	puñj 'stay, reside'	rint 'squeeze'
rirp 'go outside'	ri:tj 'run'	ta:ŋk 'climb'
toŋk 'arrive'	wonp 'die'	yo:ŋk 'hang, suspend'

(h) CVCCC

Not many words of this pattern occur:

kornt 'black flying fox'

nerŋk 'son, daughter'

pelnt 'it's them there!'

perŋk 'rifle-fish'

ŋampt 'it's us' [1]

kulnt 'it's the possum'

ternŋk 'cat-fish'

termp 'salty'

tirmp 'salmon fish'

tirnt 'beefwood tree'

turmp 'stick'

pi:rnt 'it's the horsefly'

petnt 'it's the skin!'.

Verb-stems

pirmp 'float, rise'

po:rmp 'tip, pour out'

yarmp 'cut'

werŋk 'peep'

ye:rmp 'spread (out), flutter'.

---

[1] The phonetic intrusion of transitional vowels in words like this occurs between contoids of 'incompatible' points of articulation, making them sometimes |CVC.CV| ['ŋam.p^{ə}t^{h}].

5.1.6.2 Combinations of syllables

The emic syllable, already delineated in its allo-syllabemes, serves to build words of many shapes.[1]

The Thaayorr word comprises etic syllables whose isolation may be achieved by means of Pike's abdomenomene, Stetson's chest pulse or Mazeron's chin movement. But the vowel (or syllabic contoid) supplies the real clue to distinction of the syllables within a word.

Multi-syllabic words include two or more nuclear slots with marginal consonants according to basic patterns. Pause and isolability in slowed speech confirmed one definition of the word as a fragment bounded by potential pause.[2]

The beginnings and endings of words differ according to the type of the initial and final syllables. The onset is mostly consonantal, but may be vocalic, while codas may be a vowel, a consonant or a sequence of consonants.

As phonetic syllables do not always coincide with phonemic, structure analysis requires the interpretation of isolated cases according to their internal syllable type.[3] This thesis sets up the emic syllable as the basic structural unit in forming words. It enables words of different phonological shapes to be matched in frames for comparison.

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[1] See section 5.1.5.4.

[2] C.F.Hockett. A course in modern linguistics, 1958, 166, 64.

[3] Because of individual speech disparity. Pike. Phonemics, 144.

(a) Two syllabled words (S.S)

Words of two syllables possess a syllabic structure portrayed in the chart below. The first syllable is identified on the left of the matrix and the second along the top, horizontally. There are 27 shapes from 64 possibles.

(Table 26)

(i)

	V	VC	VCC	VCCC	CV	CVC	CVCC	CVCCC
V					+	+	+	
VC					+	+	+	
VCC					+	+	+	
VCCC					+	+	+	
CV					+	+	+	+
CVC					+	+	+	+
CVCC					+	+	+	+
CVCCC					+	+	+	

Actual words found take the following shapes:

(ii)

V.CV V.CVC V.CVCC	CV.CV CV.CVC CV.CVCC CV.CVCCC
VC.CV VC.CVC VC.CVCC	CVC.CV CVC.CVC CVC.CVCC
VCC.CV VCC.CVC VCC.CVCC	CVCC.CV CVCC.CVC CVCC.CVCC
VCCC.CV VCCC.CVC VCCC.CVCC	CVCCC.CV CVCCC.CVC CVCCC.CVCC

Typical two-syllabled word-shapes may have syllabic consonants filling some nuclear slots. Structure is such that any type of emic syllable may occur word-initially, but only C-initial word-finally:

	CV	CVC	CVCC	CVCCC
V	i.tl i.'i	i.tul i:.paɽ	i:.paɽt i:.pant	(Table 27)
VC	in.tl	i:ɽ.kop i:l.nen	i:ŋ.kaɽt i:ŋ.kant	
VCC	int.le	in'.nul	in'.nult (in'.nemn)	
VCCC	in'n.pa	in'n.ŋun	in'n.ŋunt	
CV	ŋa.li yu:.ru	tu.kin me.ŋor	ko.puɽt na.ŋunp	ŋa.win'n ŋa.wulpt[1]
CVC	mim.pa men.je	wan.tan mop.ŋun	kor.kunm wan.tant	kuŋ.kuñnp
CVCC	kemp.te ŋañj.pa	kerm,per mu:ŋk-nan	porm.porn miñj.wañj	werŋ.kerŋk
CVCCC	ye:rmp-na werŋk.na	po:rmp-nan yarmp-nat	pirmp-naɽt ye:rmp-nant	

Because syllable type CVCCC occurs less frequently, an alternative solution is to regard some words as three syllables: e.g. /ŋa:.win.'n/ 'this /ŋa.wul.pt/ 'that'.[2] This thesis lists such words on the assumption that the consonant sequence is a complex margin to one emic syllable:

e.g. /kuŋ.kuñnp/ on the analogy of /werŋ.kerŋk/.[3]

The decision is one rather for phonemic interpretation than for mechanical measurement on a spectrograph.

---

[1] Where the consonant is not interpreted as syllabic.

[2] Transitional vowels occur only when points of articulation are incompatible to the frequent smooth transition in most.

[3] Assuming them to be emically two-syllabled, they could still not be pronounced in a more compact form, phonetically.

Illustrated S.S combinations

(i) Vowel-initial

V.CV

i.'i 'this (here)' a.ke 'ouch!'
i:.ja 'good job, eh?' i:.ɾa 'go there, that way'

V.CVC

a.ŋaɾ̃ 'let's try' i:.wal 'come from there'
i:.kan 'above, on top' o.kun 'might, perhaps'
u.lup 'that one (there)' i:.paɾ̃ 'south (there)'

V.CVCC

i:.paɾ̃t 'that there in south' i:.pant 'that on south bank'

VC.CV

in.tl 'this (erg)' in.'n 'here' (see page 133)

VC.CVC

i:ɾ̃.kop 'go down there' i:ŋ.kan 'up north bank'
i:l.nen 'come from above' i:ŋ.kaɾ̃ 'in the north'
oŋ.koɾ̃ 'don't' ul.put 'that's it (there)'

VC.CVCC

i:ŋ.kaɾ̃t "that in the north' i:ŋ.kant 'that on north bank'

VCC.CV

int.le 'this ... next' in".nl 'this (erg)' [1]

VCC.CVC

in'.nul 'this (erg)' [1]

VCC.CVCC

in'.nult 'this one here (erg)' in'.nemn 'from this'

---

[1] Words like these, with alternant possible spellings, are included throughout the thesis, in such examples as above.

VCCC.CV

in'n.pa 'here again'

VCCC.CVC

in'n.ŋun 'to here'

VCCC.CVCC

in'n.ŋunt 'to this one'

(ii) Consonant-initial

CV.CV

ŋa.li 'we two (exc)'
po.te 'shallow'
ka.na 'all right'
yu:.ru 'sore hand'
ko:.pe 'wait'
ŋe.ne 'what for?'

CV.CVC

ka:.paj 'cloud'
ra.kuř 'behind the knee'
po.kup 'nothing again'
ti.pur 'damp, wet'
yu:.kuw 'way out west'
me.ŋor 'shade'
ŋa.ñiř 'baby'
tu.kin 'seashell, muscle'
ri:.ran 'by oneself'
ye.neř 'open'

CV.CVCC

ko.puřt 'two of each'
pe.tetn 'quickly'
na.ŋunp 'there'
ta.řařn 'be as strong as'

CV.CVCCC

ŋa.win'n 'this here'
ŋa.wulpt 'that there'

CVC.CV

men.je 'catch (prey)'
Tut.ji 'Melaman place-name'
kan.pa 'first, front'
pir.ka 'big fat (meat)'
per.pe 'cover, wrap'

tin.ka 'with wax'
kol.ke 'flat stone scraper'
wat.pa 'dead (man)'
tur.na 'together'
wer.ke 'rub, paint'

CVC.CVC

ran.tim 'out of the hole'
wir.pan 'lady-grass'
naŋ.kun 'to you'
kat.mat 'rotten'
nan.ter 'crowd, join in'
pal.koř 'behind, beyond'

kuř.kan 'in the bush'
per.min 'turtle'
pul.nun 'belong them two'
ŋe:ŋ.ku:l 'very angry, wild'
mi:n.ŋař 'feared'
wan.tan 'where?'

CVC.CVCC

kor.kunm 'gum for spear'
ne:r.petn 'eyelid'
pir.kiřm 'naked'
ka:l.purŋ 'to forget'
pun.tirp 'after the birth'

ku:l.pu:ŋk 'crowd of people'
koŋ.kulm 'hand-bag'
ŋañ.jint 'it's us (exc)'
wař.kant 'slew round, turn'
kuŋ.kuřn 'to the north'

CVC.CVCCC

kuŋ.kuřnp 'in the north again'

CVCC.CV

kemp.te 'separate'
werŋ.ka 'in middle'
turm.pa 'with a stick'

nerŋ.ka 'by a son'
ŋañj.pa 'really secret' (poison)
miñj.ti 'great, enormous'

CVCC.CVC

kerm.per 'meat, flesh'
korm.pur 'a tree'

kirk.tu:t '4-pronged flying-fox spear'
pent.kak 'rod (with line)'

po:rm.pul 'he vomits' mu:ŋk.nan 'going to eat'
kemp.tep 'separate still' ri:ñj.nit 'getting poor'
ŋerŋ.kan 'yesterday' purŋ.mat 'blocked, shut'

CVCC.CVCC

porm.porn 'into the house' miñj.wañj 'sick in body'
puŋk.pant 'kneecap' mant.mant 'small (birds)'
yoř̃p-nuř̃p 'much the same again' nunk.tanp 'cough'
miñj.miñj 'truly, really' porm.porm 'out from the house'

CVCC.CVCCC

werŋ.kerŋk 'central, right between'

CVCCC.CV

ye:rmp-na 'for fluttering' werŋk.na 'to the peeping'
kornt.na 'to the black flying fox' tirmp.ta 'to the salmon fish'
perŋk.ta 'at the rifle-fish' turmp.na 'to the stick'

CVCCC.CVC

po:rmp-nan 'going to vomit' yarmp-nat 'did cut'
pirmp.mul 'he floated' kornt.kak 'got a flying-fox'
werŋk.nan 'going to peep' ye:rmp.nat 'did flutter'

CVCCC.CVCC

pirmp.nař̃t 'you go and float' ye:rmp-nant 'you're going to /fly'
werŋk-nant 'it's going to peep' yarmp-nař̃t 'it's (you) must cut it'

(b) Three-syllabled words (S.S.S)

The following structures occur:

Initial	Medial	Final
V	.	.
VC	.	.
VCC	.	.
CV	CV	CV
CVC	CVC	CVC
CVCC	CVCC	CVCC
CVCCC	.	(CVCCC)

(Table 28)

Examples of these structures follow:

	.CV	.CVC	.CVCC
V.CV.		i.la.wun	i:.ři.pant
V.CVC.		i:.tiŋ.kan	i:.řuŋ.kant
VC.CV.		i:ŋ.ka.řaw	i:ŋ.ka.řant
VCC.CV.		in'.ne.min	in'.ne.minp
CV.CV.	koŋoto	na.ŋa.nam	ki.la.tirn
CV.CVC.	ŋo.ton.je	pa.luŋ.kan	yu:řuŋ.kant
CV.CVCC.	(ko.puřt.na)	pi.nirm.nam	na.ŋunp.nuřp
CVC.CV.	wer.ka.ta	mar.ji.kin	punt.wi.lart
CVC.CVC.	wu:t.jin.ja	wut.ŋul.mun	wan.tin.pa:nt
CVCC.CV.	punt.ma:.ra	ruñj.na.tat pa:nt.me.rem	pa:nt.me.remt
CVCC.CVC.	miñj.waň.ji	pirm.pin.nan	maŋk.wař.kant
CVCC.CVCC.		ŋerŋ.kerŋ.kan	rirm.pirm.pint
CVCCC.CV.	(Table 29)	po:rmp.na.tat	
CVCCC.CVC.		ye:rmp.nan.nař	ye:rmp.na(n).namp[1]

[1] This type of example found in many of the boxes can be obtained by suffixing one of the bound morphemes comprising one segmental phoneme. See 5.1.5.3.

Illustrations of S.S.S-combinations

V.CV.CVC

i:.la.wun 'come from the east' i:.lo.pon 'from below'
i:.ři.pan 'go to south bank' i:.ti.pař 'on south side'

V.CV.CVCC

i:.ři.pant 'you go to south bank'

V.CVC.CVC

i:.tiŋ.kan 'there on north bank'

V.CVC.CVCC

i:.řuŋ.kant 'go to north bank there!'

VC.CV.CVC

i:ŋ.ka.řaw 'at the N.E.' i:ŋ.ka.řuw 'at the N.W.'
i:ŋ.ka.řop 'down river in N.' i:ř.ka.wan 'go to the E.'

VC.CV.CVCC

i:ŋ.ka.řawt 'you...in N.E.' i:ŋ.ka.řuwp 'in N. again'

VCC.CV.CVC

in'.ne.min 'from here' in".nu.ŋun 'to here'

VCC.CV.CVCC

in'.ne.minp 'from here again' in'.nu.ŋunt 'it was to here'

CV.CV.CV

ko.ŋo.to 'small flies' ta.pi.ři 'close'

CV.CV.CVC

ŋa.ŋa.nam 'mother'
ro.ŋo.mak 'into rainwater'

CV.CV.CVCC

ki.la.tirn 'in the sun'
yu:.ři.kant 'you go to far north bank'

CV.CVC.CV

ŋo.ton.je 'mountain'
pi.nal.ma 'for three days'
ta.tom.pu 'whale'
ta.tur.ma 'together'
ta.wuŋ.ka 'mouth open'
to.non.pe 'dove'
wi.tiř.ma 'initiation'

CV.CVC.CVC

ko.řuŋ.kun 'afterwards'
wa:.laŋ.kur 'death adder'
pa.luŋ.kan 'come from north bank'
yo.kun.man 'this thing'
ŋa.wul.put 'that there'
to.nuŋ.kun 'invited to sit together'

CV.CVC.CVCC

wa.'ar.pant 'jelly-fish head'
wa.'ap.punt 'branch of river'
yu:.řuŋ.kant 'go far north bank'

CV.CVCC.CV

(ko.puřt.na) 'to the snapper'

CV.CVCC.CVC

pi.nirm.nam 'was thinking'
pi.nirm.lat 'might be nearly thinking'

CV.CVCC.CVCC

na.ŋunp.nuřp 'just there'

CVC.CV.CV

wer.ka.ta 'jungle-fowl'
me:r.ko.le 'taipan snake'

pin.po.ɽo 'barramundi'
pil.we.te 'father'
woy.ŋo.te 'with fighting-stick'
yu:r.yu.ru 'sore hand'

CVC.CV.CVC

mar.ji.kin 'yamdish'
me:r.ya.wun 'sharp point'
taɽ.mu.tuɽ 'pelican'
pil.ma.yam 'teenage boy'
yiɽ.yi.ɽam 'various'
me:r.wu.tam 'from sleep'
nen.ti.tin 'grandson'
waɽ.ŋe.teɽ 'fa-in-law'
pul.nu.ŋun 'for them two'
yu:ŋ.ka.ɽop 'far away to N. river'

CVC.CV.CVCC

punt.wi.lart 'with sister'

CVC.CVC.CV

wu:t.jiñ.ja 'to Dad'

CVC.CVC.CVC

wut.ŋul.mun 'midnight'
ton.tun.tam 'from one person'
me:r.pur.ŋum 'blunt'
pel.nan.tam 'from them'
tut.put.pan 'a lizard'
koŋ.kul.mak 'in handbag'
pun.kur.taɽ 'hungry'
wan.tan.ŋun 'where to?'

CVC.CVC.CVCC

wan.tin.pa:nt 'Archilles tendon'
tin.tin.pa:nt 'rainbow'
paɽ.ir.pa:nt 'girl'

CVCC.CV.CV

punt.ma:.ra 'husband, bro-in-law'

CVCC.CV.CVCC

ruñj.na.tat 'might knock down'
pa:nt.me.rem 'girl-friend'

CVCC.CV.CVCC

pa:nt.me.remt 'it's the girl friend'
pa:nt.me.remp 'girl-friend again'

CVCC.CVC.CV

miñj.wañ.ji 'sick (op.)'

CVCC.CVC.CVC

pirm.pin.nan 'going to make float'
pirm.pin.nam 'was causing to float'

CVCC.CVC.CVCC

maŋk.wař.kant 'wandering round'

CVCC.CVCC.CVC

ŋerŋ.kerŋ.kan 'this morning'
meln.keln.kař 'tomorrow'
maŋk.wařk.lat 'nearly circled'
ŋurn.turn.tuř 'by night'
rirm.pirm.pin 'walagi lizard'

CVCC.CVCC.CVCC

rirm.pirm.pint 'it's the walagi lizard'

CVCCC.CV.CVC

po:rmp.na.tat 'nearly vomited'

CVCCC.CVC.CVC

ye:rmp.nan.nař 'make it flutter off!'

CVCCC.CVC.CVCC

ye:rmp.na(n).nam-p 'was making it flutter still'

(c) Four-syllabled words (S.S.S.S)

The following structures occur:

(Table 30)	-CV	-CVC	-CVCC
V.CV.CV.		i:.li.pa.ɾaw	i:.li.pa.ɾawp[1]
V.CVC.CV.		i:.ɾiŋ.ka.ɾuw	i:.ɾiŋ.ka.ɾuwt
CV.CV.CV.		po.te.pa:.tir	po.te.pa:.tirp
CV.CV.CVC.	ku.mu.nin.ta	wu.pu.ɾin.tiɾ	wu.pu.ɾin.tiɾt
CV.CV.CVCC.		ki.la.tirn.mam	ki.la.tirn.mam-p
CV.CVC.CV.		pa.luŋ.ka.ɾop	pa.luŋ.ka.ɾopt
CV.CVCC.CV.		ma.nuñj.na.tat	ma.nuñj.na.tatp
CVC.CV.CV.		we:r.ke.na.maɾ	we:r.ke.na.maɾl
CVC.CVCC.CV.		ka:l.purŋ.na.tat	ka:l.purŋ.na.tatn
CVCC.CV.CV.		pa:nt.wa.'a.man	pa:nt.wa.'a.mant

Illustrations of S.S.S.S

V.CV.CV.CVC

i:.li.pa.ɾaw 'come from SE' i:.ɾi.pa.ɾuw 'go to S.W.'

i:.ti.pa.ɾop 'down river S. side' i:.ti.pa.ɾuw 'on S.W. side'

V.CVC.CV.CVC

i:.liŋ.ka.ɾaw 'from N.E.' i:.ɾuŋ.ka.ɾaw 'go to N.E.'

i:.tiŋ.ka.ɾop 'at river N. side' i:.luŋ.ka.ɾop 'come from river in the north'

CV.CV.CV.CVC

po.te.pa:.tir 'shiver, shake' ti.ti.no.kur 'kingfisher'

to.no.no.kar 'that's enough' pa.li.pa.ɾaw 'come from S.E.'

CV.CV.CVC.CV

ku.mu.nin.ta 'brown lizard'

---

[1] Unless these final consonants be interpreted (in some cases), as syllabic. By the addition of still another monophonemic morpheme, some may fulfil the pattern |-CVCCC| word-finally.

CV.CV.CVC.CVC

wu.pu.řin.tiř 'sweating' ta.mu.ran.kin 'crooked foot'

CV.CV.CVCC.CVC

ki.la.tirn.mam 'out of the sun'

CV.CVC.CV.CVC

pa.luŋ.ka.řop 'come from the river northwards'

pa.luŋ.ka.řaw 'come from NE'

pa.luŋ.ka.řuw 'come from NW'

CV.CVCC.CV.CVC

ma.nuñj.na.tat 'nearly dozed'

CVC.CV.CV.CVCC

we:r.ke.na.mařl 'He better rub himself'

CVC.CV.CV.CVCCC

we:r.ke.na.mař-nt 'you better rub yourself'

CVC.CVCC.CV.CVC

ka:l.purŋ.na.tat 'nearly forgot'

CVCC.CV.CV.CVC

Pa:nt.wa.'a.man 'Place-name'

CVCCC.CVCC.CVCC.CVC

ŋurnt.ŋurn.turn.tuř 'nearly sunrise'

The structure of 4-syllabled words is:

	Initial	Medial	Final
V	+	-	-
CV	+	+	+
CVC	+	+	+
CVCC	+	+	+
CVCCC	+	-	+

(Table 31)

(d) Five-syllabled words (S.S.S.S.S)

The distribution of syllables in this word-shape is:

Initial	Medial	Final
CV	CV	CV
CVC	CVC	CVC
CVCC	CVCC	CVCC

(Table 32)

These are observable in the following words:

CV.CV.CVC.CV.CVC

ri.la.mot.me.ɾ̃en 'mouse'

CV.CV.CVC.CV.CVCC

ri.la.mot.me.ɾ̃en-t 'it's a mouse'

CV.CVC.CV.CV.CVC

ku.nut.na.ma,ɾ̃-ay 'I better take it out'

wa.ɾ̃am.na.ma,ɾ̃-ul 'He was getting worse'

CVC.CV.CVC.CV.CVC

me:r.wa.ɾ̃an.na.nam 'was looking evilly'

me:r.wa,ɾ̃an,na,naɾ̃ 'growl angrily'

CVC.CVC.CV.CV.CVC

ka:l,pur,ŋ-m,na,tat 'nearly forgot'

CVC.CVC.CVCC.CVCC.CVC

yaŋ.kar.runm,runm,min 'mythological ostrich'

CVC.CVC.CVCC.CVCC.CVCC

yaŋ,kar,runm,runm,min-t 'It's the B I R D !'

CVCC.CV,CV,CV,CVC

ŋerm.pe.na,n-i.j-ɾ̃t 'nearly pushed him down'

CVCC.CV.CVCC.CVCC.CVC

ŋurn.t^{U}.ŋurn.turn.tuɾ̃ 'at daybreak'

(e) Combinations of six syllables (S.S.S.S.S.S)

CV.CV.CVC.CV.CV.(C)VC

to.to.wol.na.nr.(r)ul 'he made (them) keep playing'[1]

CVC.CVC.CV.CV.CV.CVCC

ka:l.pur.ŋm.na.ta.tunt 'you nearly forgot'[2]

CVCC.CV.CV.CV.CV.CV

ŋerm.pe.na.ni.jr̃.ta 'nearly pushed down' [3]

(f) Minimal and maximal words

Minimal words are composed of one vowel segment, either lengthened or terminated by a glottal stop.[4]

Maximal words are six-syllabled as above, most syllables being of CV-pattern. Reduplication may be exploited to supply more examples (which can be consulted in a later work.)[5]

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[1] Alternative structure is CV.CV.CVC.CV.CVC /to.to.wol.na.nrl/.

[2] Alternative structure is CVC.CVC.CV.CV.CV.CVC /ka:l.pur.ŋm.-na.ta.tnt/.

[3] In which another consonant, /r̃/ functions as syllabic (see section 5.1.5.3).

[4] See section 5.1.6.1.

[5] The lexicon will be combined with oral literature, later, in a subsequent volume.

5.1.6.3 Word construction by means of syllables

Thaayorr words are constructed by means of the following eight syllable types which may unite as indicated in the diagram:[1]

(Table 33)

Type	Mono	Two-S	Three-S	Four-S	Five-S	Six-S[2]
V	+	+ -	+ - -	+ - -	- - -	- - -[3]
VC	+	+ -	+ - -	- - -	- - -	- - -
VCC	+	+ -	+ - -	- - -	- - -	- - -
VCCC	+	+ -	- - -	- - -	- - -	- - -
CV	+	+ +	+ + +	+ + +	+ + +	+ + +
CVC	+	+ +	+ + +	+ + +	+ + +	+ + +
CVCC	+	+ +	+ + +	+ + +	+ + +	+ - +
CVCCC	+	+ +	+ -(+)	+ - +	- - -	- - -

[1] Noun-class markers have been excluded from the examples except in a few rare cases. This thesis interprets them as pre-posed clitics, but they do function with the following noun as intimate phonological units.

[2] Verb-stems with various suffixes for tense/mood/aspect have not been multiplied in these lists. They form part of a larger subsequent study.

[3] Word-slots are: initial, medial and final.

5.1.7 INTONATIONAL PATTERNING

5.1.7.0 Introduction

Thaayorr speech-flow soon gave evidence of different basic pitch contours which combine into patterns described in this thesis as 'intonemes'. The intonation with which Edward River speakers mould their utterances is the study within this section. The following subdivisions describe emic intonation patterns whereby the language is manipulated to convey the 'suprasegmental extra' to a grammatically relevant sequence of words.

Pike's phonological building units of word/phrase/-clause/utterance serve as points of reference to clarify patterns of intonation peculiar to this vernacular. Fluency in conversation, even though it be grammatical, cannot make the message fully intelligible to the native speaker unless the 'tune' coincides with tonal patterns which are emic.

The P-word (phonological word) is a unit comprising segments, and uniting to form P-phrases and P-clauses.[1] This work studies them by auditory analysis and by mechanical means. Experiment and careful listening reveal that even though accurate measurements by electronic means may tell the linguist exactly what his speech samples are doing in the dimensions of frequency/intensity/duration, yet, in the final analysis, it is his own auditory impression which is important to interpret the pitch/loudness/length. This description of auditory prominences in Ta:yoř speech takes note of psycholinguistic factors which make utterances communicate what the informant intended.[2]

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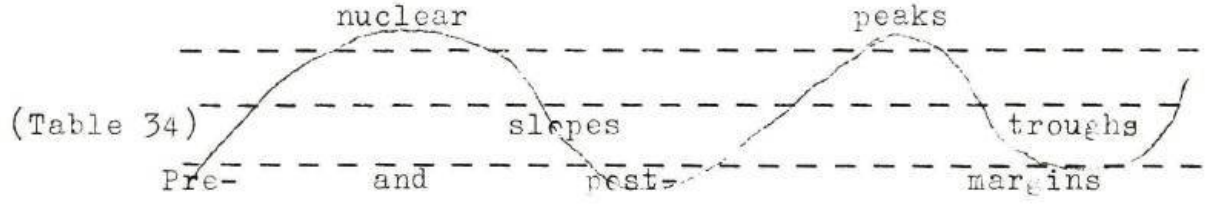
[1] Grammatical words have provided the examples up to this point. P-words are derived from them in that their segmental borders are either extended or lost.

[2] At the terminal points of these utterances, or P-phrases, two kinds of pause may occur, tentative and final. The latter is marked by a more peremptory fall in pitch.

5.1.7.1 The phonological word in Ta:yoř

Deciding where words begin and end required more than phonological evidence. Additional grammatical 'clues' were often necessary to define word-breaks when the intonational 'tune' joined P-words into clauses.

Single words are 'waves' of language having peaks, slopes, margins and troughs. Margins initiate and conclude the nucleus which is central. Ta:yoř words are subject to variation in stress, length and pitch.[1] They formulate utterances by combining in strings:



The nucleus of a word has auditory prominence in the rhythmic unit. It often exceeds neighbouring sounds by having extra stress, length or pitch, but not necessarily all three features at once. Units found to be complete utterances occur in this word between spaces. Similarly, utterance-initial (or -final) groups of phonemes appear between spaces. These units may show phonemic modification.[2] Not only has morpheme-initial stress disclosed word-boundaries, but aspiration, or juncture, indicate ends of words.[3]

Words are made from phonetic syllables which coincide with breath-pulses, ever changing as the lungs push out air in stress and rhythm groups.[4] Nuclear energy-peaks (consisting of

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[1] See section 5.1.7.2.

[2] Morphologically conditioned.

[3] e.g. /n/ and /r̃/ may not be word-initial.

[4] See section 5.1.7.3 and 5.1.7.5.

a vowel, or a syllabic consonant) have an initial slope or onset and a following slope called a coda: [1] e g. /i:paɽ̃/ 'south',

first syllable: /i:-/ is onset + nucleus + coda
second syllable: /-p-/ is onset, /-a-/ nucleus and /-ɽ̃/ coda:

e.g. ['k^{h}ɑn.pɑ] /kan.pa/ 'first, prior',

first syllable: /k-/ is onset, /-a-/ nucleus, /-n/ coda
second syllable: /-p-/ is onset, /-a/ is nucleus + coda.

Thus, in Thaayorr, vowels or consonants may be all three with one exception, that a single consonant never forms a word.

Several facts have become clear in the search for the features of the P-word (phonological word):

(i) The P-syllable often borrows the final consonant of a preceding syllable to be its onset: e.g. /mu:ŋ.k-aɽ̃/ 'ate', /yu:-ɽ̃-uŋ-kaɽ̃-uw/ 'go far to N.' /yu:.ɽ̃uŋ.ka.ɽ̃uw/.

(ii) T̲a:yoɽ̃ medial consonants sound double or geminate. Though phonemically single, yet in phonology, they are lengthened and often delayed in their release (being in double function). Thus, they are frequently both coda and onset.

(iii) P-words are not always coterminous with grammatical words; e.g. lexical markers mostly fuse with their head, as also do some heads with their attributives:

e.g. /mi̲n 'ko̲to̲n/ 'wallaby' [mIn̲^{ə}ko̲to̲n]
/pam 't̲u:mp/ 'greyhead' [p^{h}ɑmə̲ʊ:mp^{h}].

(iv) The stress-rhythm of T̲a:yoɽ̃ phrases and clauses affects the stress pattern of individual words. Morpheme-initial stress may be weakened by the utterance pattern of stress.[2]

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[1] Crescendo and decrescendo, acceleration and deceleration, pitch-rise and pitch-fall, fortis and lenis, may also occur in varying rates of utterance over these slopes.

[2] This implies morpheme-initial stress on verb-roots.

5.1.7.2 Suprasegmental elements

Three 'prosodic' elements characterise Ta:yoř speech-flow. Stress, length and pitch intermingle to give many versions of the same utterance.[1] Acting from outside the utterance-string, they modify the segmental elements within it.

(i) The syllable bears the accent placement. The auditory appraisal of speech samples discloses the fact that the monosyllable carries the highest degree of stress only when put into focus.[2] There are three degrees of loudness, as in English.

Ta:yoř lexical markers do not reduce the stress of their head words which follow in phonetic union. Modifiers of heads, though adjectival, carry the main stress.[3] But operative suffixes frequently receive greater stress than initial syllables of the root-morpheme:

e.g. /'ŋatn/ 'my'; cf. /'ŋa"t-un/ 'to me'.

(ii) Pitch interacts with stress, as it forms the contours of intonational levels. The degree of 'vibrato' (caused by differing emotional states) varies from one informant (and occasion) to another. Ta:yoř is an intonation language like English, and does not have lexical tone to distinguish contrasts of meaning. Pitch is important on the syntactic level, giving rise to various 'tunes' in utterances, to convey attitude and emotion.[4]

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[1] Aboriginal informants can rarely repeat utterances identically.

[2] Cf. C.F.Hockett. A course in modern linguistics, 1958, 100.

[3] See section 5.1.7.1 (iii).

[4] Phrase stress is independent of morpheme-initial stress.

Stress exemplified

(Table 35)

['mʊ:ŋkʰ]	/mu:ŋk/	'eat, swallow'
['pam]	/ṗam/	'man, person'
['n̲ɛ:ṛŋk]	/n̲erŋk/	'son, daughter'
['ŋɑn̲ɪn] ~ ['ŋan̲:In]	/ŋan̲in/	'daddy'
['ṛɪ:ṛan]	/ri:ran/	'alone, solitary'
['rumpʰ]	/rump/	'beach'
['rum'pun]	/rump-un]	'on the beach'
['yʊ:ṛ]	/yu:r/	'hand, fingers'
['yʊ:'ṛʊ]	/yu:r-u/	'with (sore) hand'
['pʰɛln]	/peln/	'they'
['pʰɛl'n̲an]	/pel-n̲an/	'them'
['t̲ʰɛ:ṛk]	/t̲e:rk/	'return'
['t̲ʰɛ:ṛ'kan]	/t̲e:rk-an/	'cause return'
['ṛɪ:ʈʈj]	/ri:tj/	'run'
['ṛɪ:t'tjaɾ̃]	/ri:tj-aɾ̃/	'ran'
['ŋɔkʰ]	/ŋok/	'water, liquid'
['ŋɔ'kɛln] ~ ['ŋɔk:ɛln]	/ŋok-e-ln/	'into the water'
['ŋɔ'k:ɛm]	/ŋok-e-m/	'out of the water'
['kʰoŋkʊlm]	/koŋkulm/	'dilly bag, handbag'
['kʰoŋkʊl'mɑk]	/koŋkulm-ak/	'from the handbag'
['pʰɑ:n̲tʰ]	/pa:n̲t/	'woman, wife, girl'
['pɑ:n̲tʰ ə 'mɛṛɛm]	/pa:n̲t-merem/	'girl-friend'
['mɪn̲ə 'kʰo̲ton]	/min̲ ko̲ton/	'wallaby'
['kʰɑ:lʊ 'ŋɛ:m]	/ka:l-ŋe:m/	'remember, know'

(iii) Length is phonemic in Thaayorr, morpheme-initially.[1] Both stress and pitch may interact with length on a semantic level, but this is a phonetic feature of the language concerned with emotional states and attitudes. Lexical length is indicated by the symbol [:].[2]

Actual length of the different phonemes is not at all consistent. Continuants are longer than stops, which are shorter at the beginning of words. Length is relative and lexical only when it effects contrast, as it does in morpheme-initial syllables.

Voicing of allophones is a cause of phonetic alteration of the length of preceding vowels/nasals. Like the lengthening of intervocalic consonants, this has no phonemic validity.

Interjections, commands and certain emotional pressures cause an extreme shortening of some utterances. The glottal stop occurs both initially and finally in many of these verbal ejaculations. But it is merely phonetic in occurrence.[3] Quoted speech may cause perturbation of contour features.

The next division gives an analysis by auditory impression, of 69 speech samples in which the above three suprasegmental characteristics combine to modify the phonemic segmentation.[4]

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[1] See section 5.1.4.2.

[2] A short vowel is defined as of 1 mora in 'duration', and a long vowel [o:] is approximately double, i.e. two mora.

[3] See section 5.1.6.1 (e).

[4] Cf. the 'pseudo-length' of certain adjectives for degree of comparison: e.g. /moŋ/ 'many' and [mo::ŋ] 'very, very many'. Also, in verbs: e.g. /wunr/ 'lie down' and [wu::nr] to indicate continuity or a particularly long time.

5.1.7.3 Phrase/clause analysis by auditory impression

The analysis of speech utterances in Thaayorr has required precise observation of suprasegmental characteristics. These are flexible, varying from clause to phrase, to word and even to syllable. A major stress occurs in almost every utterance and it tends to dominate the intonational contour. Such contours become clearer as the pitch levels are joined up.

The following 69 samples of speech show how the Edward River speaker breaks the sentence into sequential fragments, each being marked by phonological features between the pauses. A falling tone most commonly marks the end of an utterance, and a rising tone, some unfinished point of discourse, though less frequently so than might be expected.

Investigation proceeds first by auditory appraisal of the samples and then by mechanical study of Thaayorr speech.[1] Conclusions are recorded after each section.[2]

Emotional states, attitudes and feelings mark speech by minute signals which informants may employ to communicate their message in an individual way. Phrases and clauses are treated concurrently in this thesis. A few 'mental' factors were obvious:

Weariness, calling attention, normality, incredulity, command, imperiousness, reported incident, anxiety, interrogation, doubt, emphasis, puzzlement, impatience, anger, humour, ridicule, finality, non-finality, superiority, inferiority, solicitation and many others.

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[1] See sections 5.1.7.3 and 5.1.7.5.

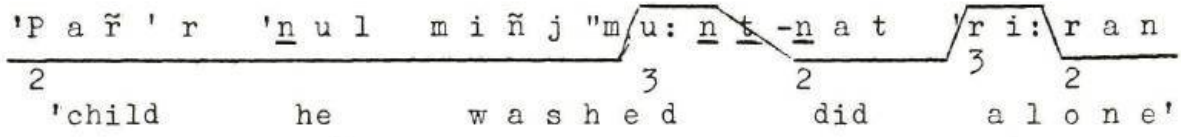
[2] See sections 5.1.7.4 and 5.1.7.6.

Phonological analysis of Thaayorr speech samples

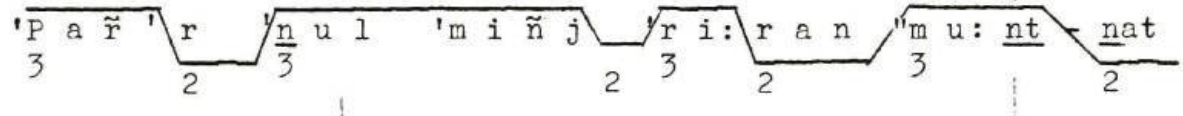
Auditory analysis of 69 utterances serves to indicate the characteristics of Ta:yoř speech:[1]

(Table 36)

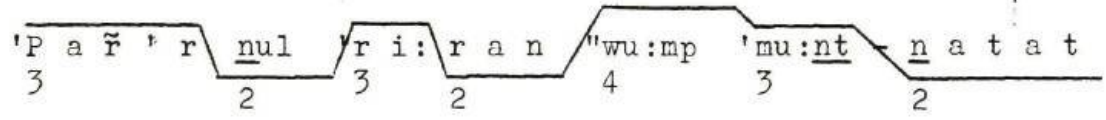
Sample number	Rate of utterance	Modulatory frame of mind	Terminal[2]
One	slow	normal, calm, indicative, stative	/\/\ J



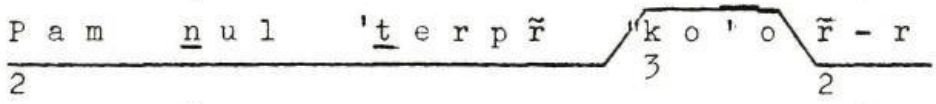
Two	fast	angry, emotions rising	/\/\ J



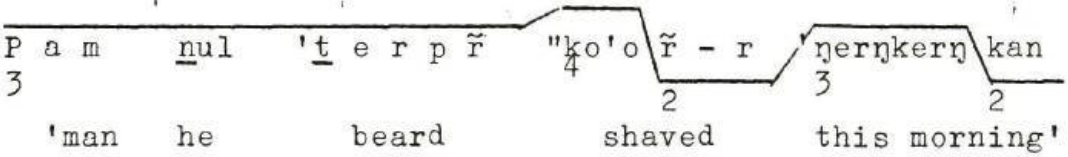
Three	fast	interrogative, rather urgent, tense	↘ T



Four	slow	calm, indicative, statement	--> J

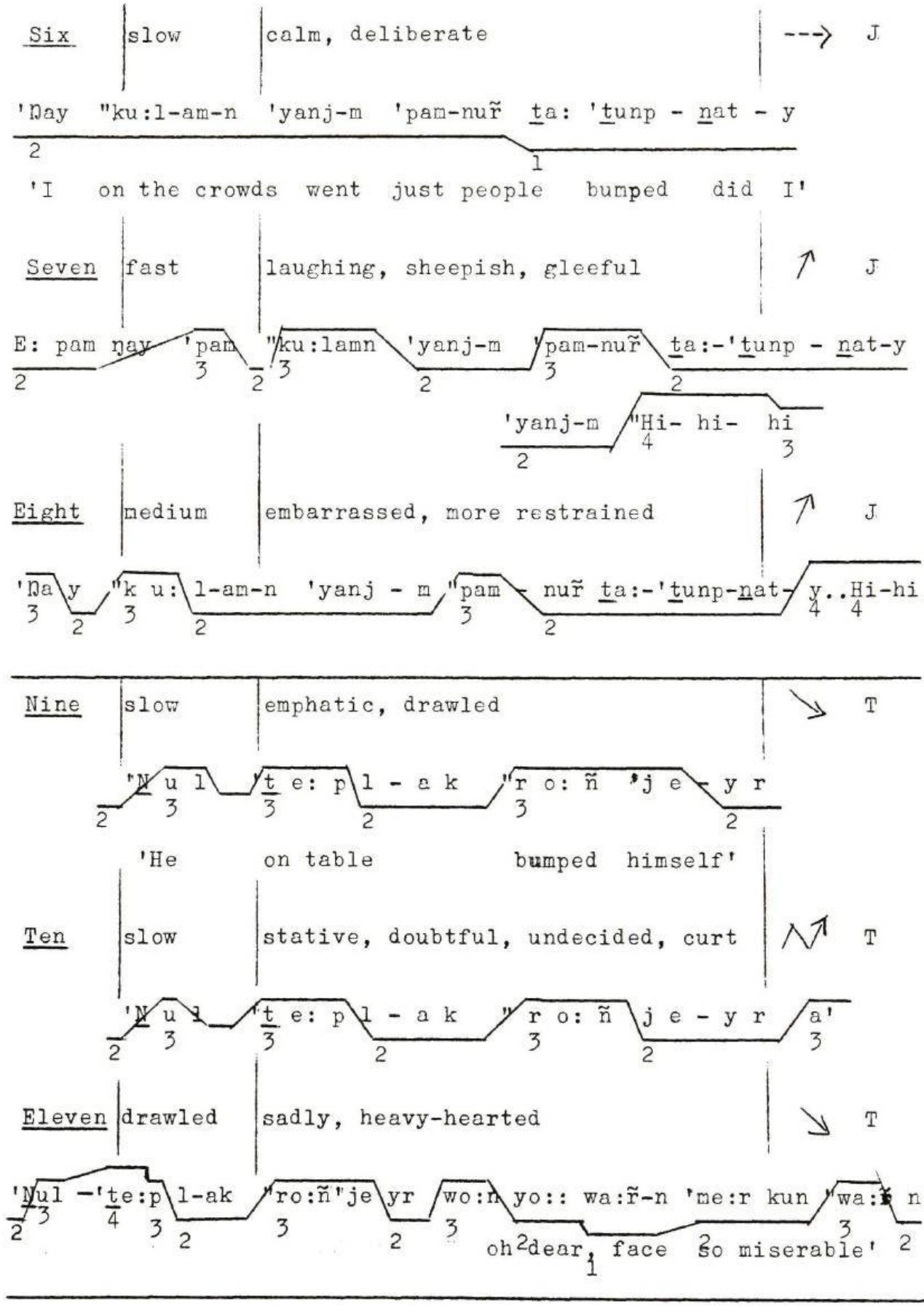


Five	fast	enthusiastic, with emphasis	/\/\ J

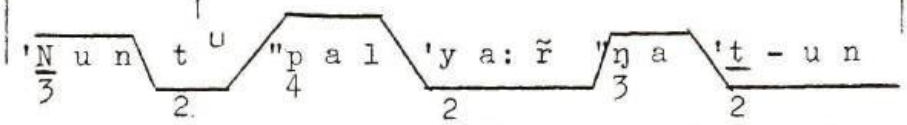


[1] Obtained from Joseph Pita (J) and Teddy Rogers (T) during their enforced stay at Palm Island.

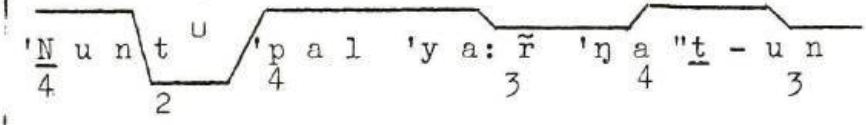
[2] Conclusive ↘, continuative -->, Alternating /\/\, and emphatic /\ terminal contours.


Six | slow | calm, deliberate | --> J
'Nay "ku:l-am-n 'yanj-m 'pam-nuñ ta: 'tunp - nat - y
'I on the crowds went just people bumped did I'
Seven | fast | laughing, sheepish, gleeful | ↗ J
E: pam nay 'pam "ku:lamn 'yanj-m 'pam-nuñ ta:-'tunp - nat-y
'yanj-m "Hi- hi- hi
Eight | medium | embarrassed, more restrained | ↗ J
'Na y "k u: l-am-n 'yanj - m "pam - nuñ ta:-'tunp-nat- y..Hi-hi
Nine | slow | emphatic, drawled | ↘ T
'N u l 't e: p l - a k "r o: ñ 'j e - y r
'He on table bumped himself'
Ten | slow | stative, doubtful, undecided, curt | ↗↘ T
'N u l 't e: p l - a k "r o: ñ j e - y r a'
Eleven | drawled | sadly, heavy-hearted | ↘ T
'Nul -'te:p l-ak "ro:ñ"je yr wo:n yo:: wa:ñ-n 'me:r kun "wa:ñ n
oh dear, face so miserable'

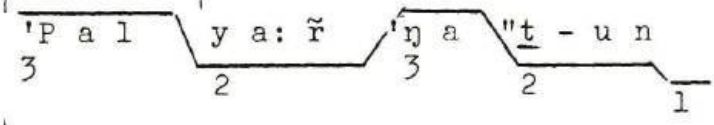
12 | medium | imperatively | T



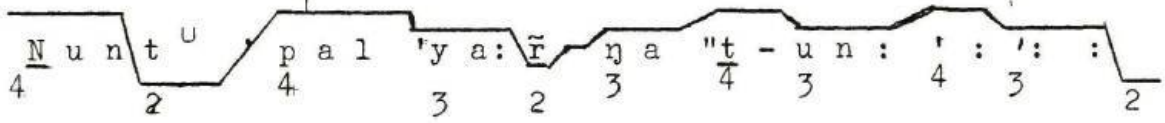
13 | faster | to distant man, shouting, urgently | ↘ T



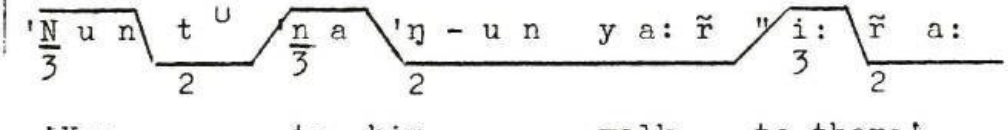
14 | slow | repeated with less urgency | T



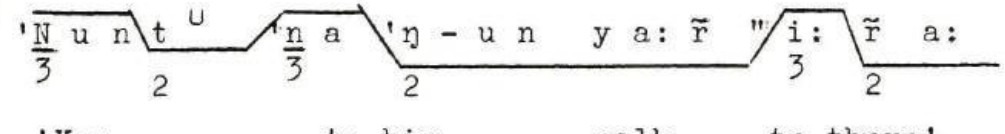
15 | fast | angrily, very dominating | T



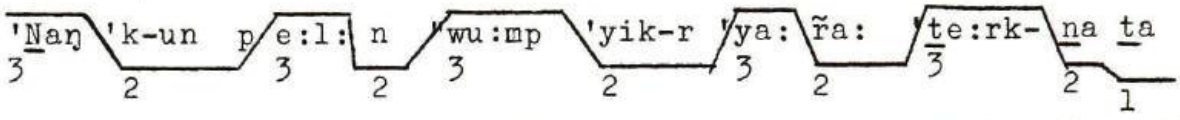
16 | medium | imperatively and aspirated | T



17 | faster | imperatively, breathily also | T

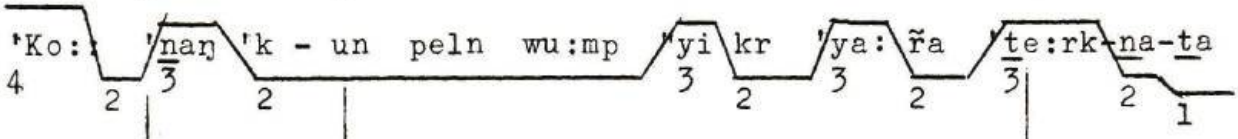


18 | slow | normal, interrogative, calm | ↘ J

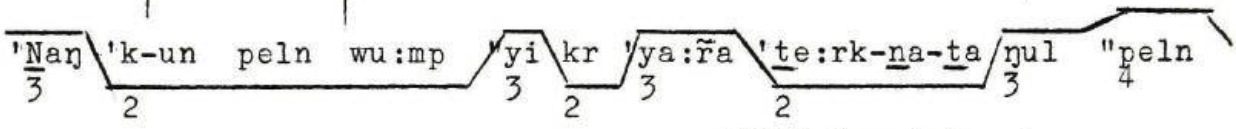


'To you they did ? say to there must return ?'

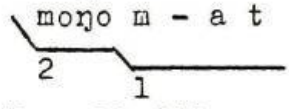
19 | medium | blasé, restrained surprise | ⩘ J



20 | medium | unbelievingly sceptical | ↘ J

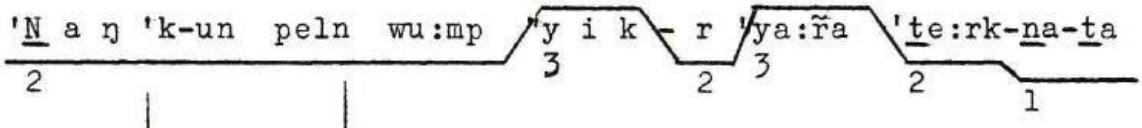


'Did they ask you to return?

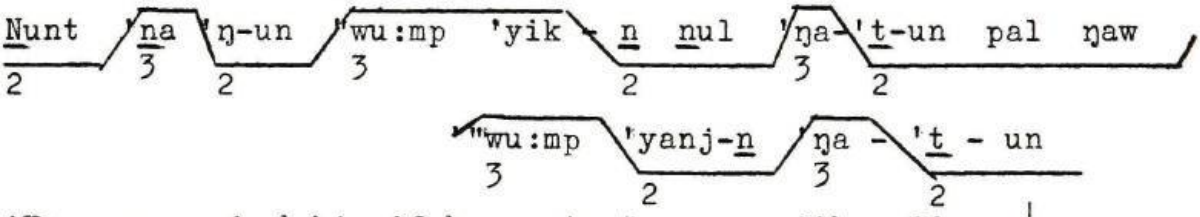


But they lied!'

21 | fast | angry question, rebukingly | ↘ J

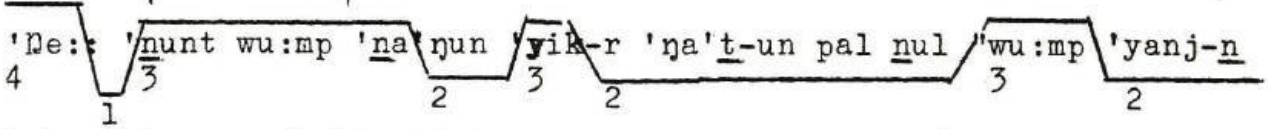


22 | slow | calm question, neutrally | ⩘ J

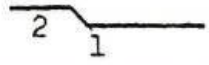


'Have you asked him if he wants to come with me?'

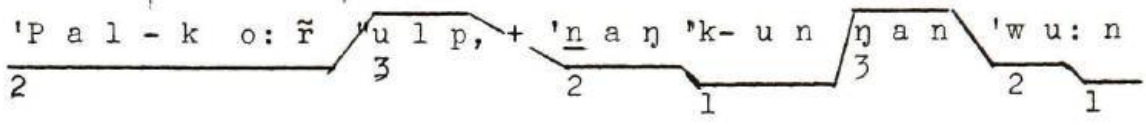
23 | medium | surprised interrogative | --> J



'Oh, did you ask him if he can come with me' 'ŋa't-un

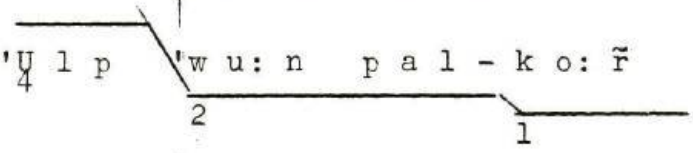


24 | slow | calm, descriptive statement | ↘ T

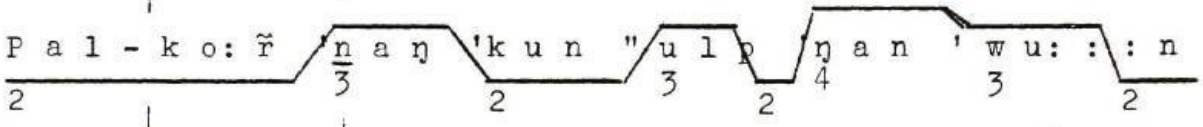


'Behind that to you what lies'

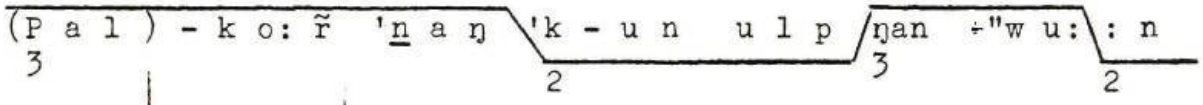
25 | fast | dogmatic assertion | ↘ T



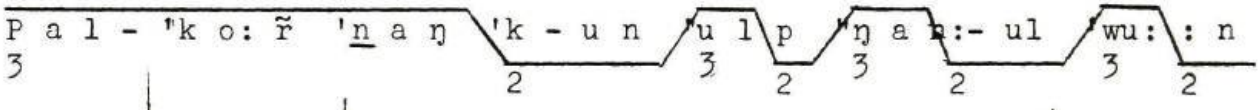
26 | slow | precise, definite | ↘ T



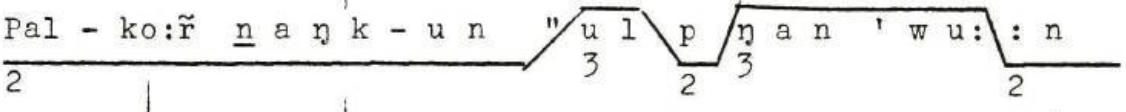
27 | slow | explanatory with rebuke | ↘ T



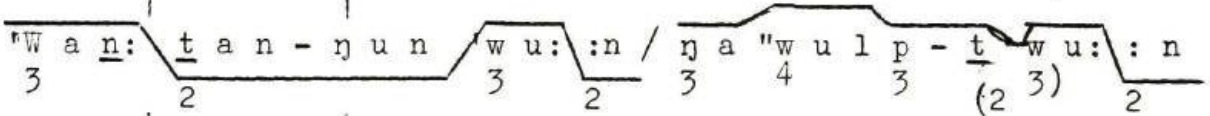
28 | slow | interrogative, patiently | ⩘ T



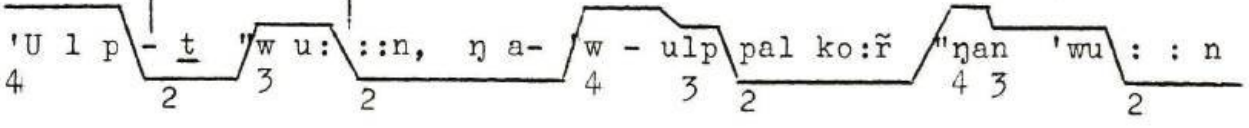
29 | medium | bored and dull, disinterested | ↘ T



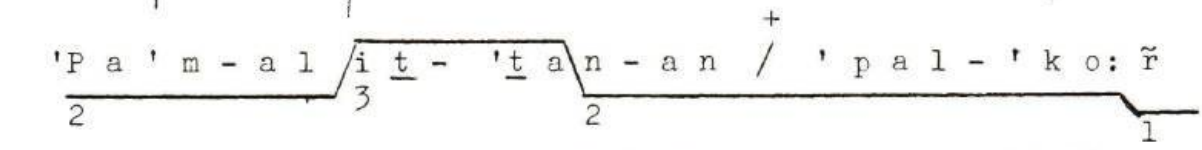
30 | medium | bored and impatient, resentful | ↘ T



31 | medium | angry, impatient, frustrated | ↘ T

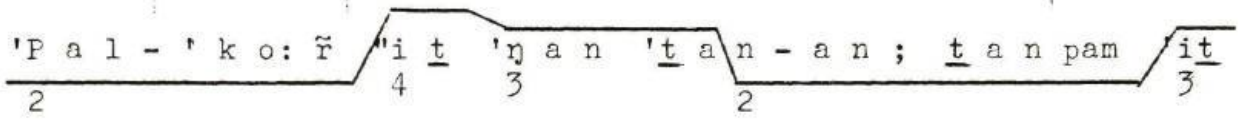


32 | medium | calm, indicative statement of fact | --> J



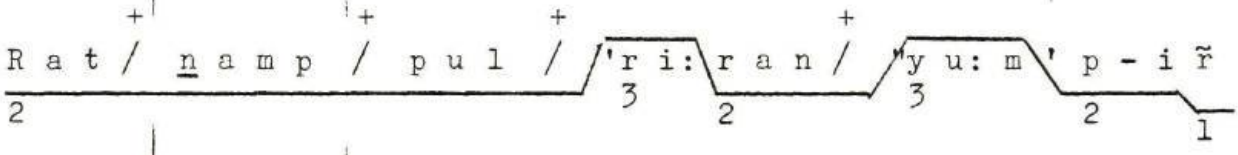
'Man that standing behind'

33 | fast | annoyed, talking strongly, curtly | ↗ J

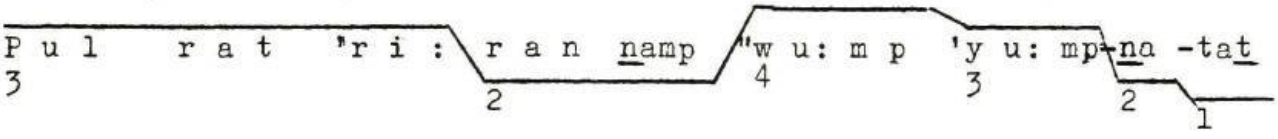


'Behind that who standing stands man that'

34 | slow | deliberate, heavy | ⩘ J

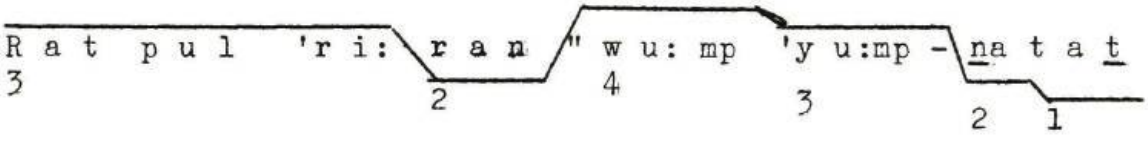


35 | slow | interrogative, enquiringly | ↘ J

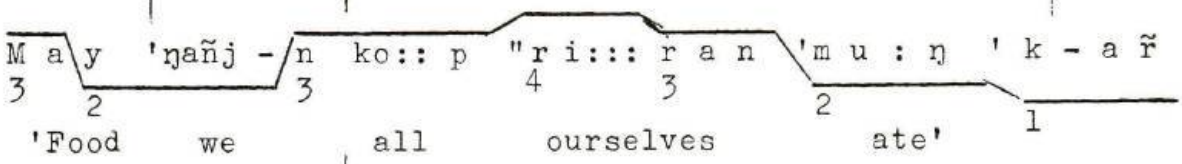


'They two letter alone names did ? wrote?

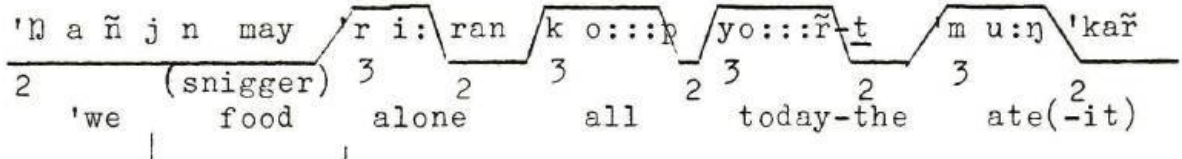
36 | slow | interrogative, amicably | ↘ J



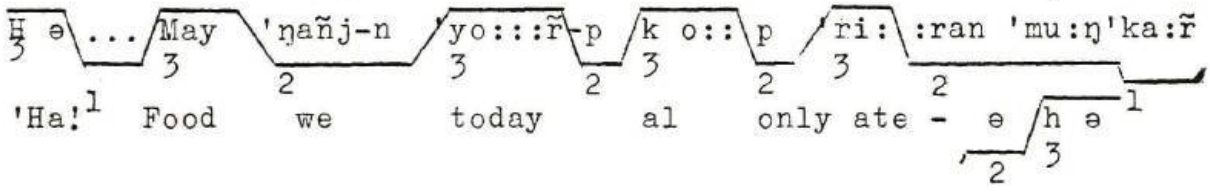
37 | slow | calm, declarative, factual | ↘ T



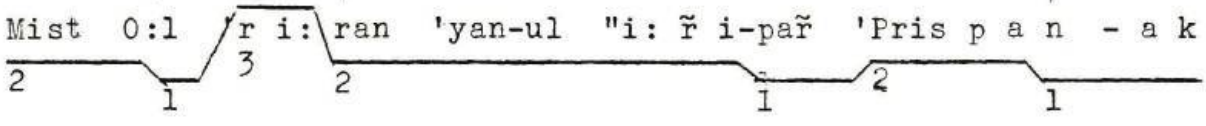
38 | medium | sheepish, guilty, amused | ⩘ T



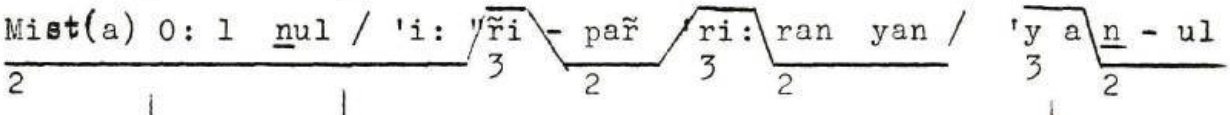
39 | slow | laughing sheepishly throughout | ↗ T



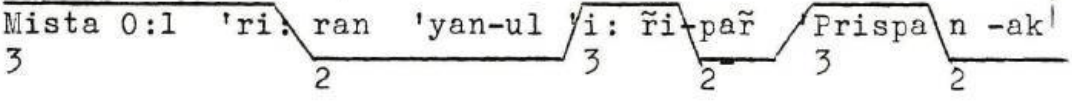
40 | slow | tired, weary, droning, fatigued | ⩘ T



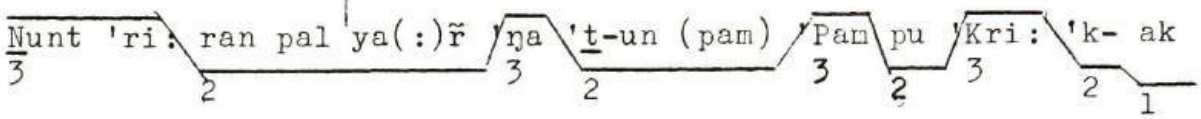
41 | slow | hesitatingly, mentally bored | ⩘ T



42 | medium | statement of fact, neutrally | ⩘ T

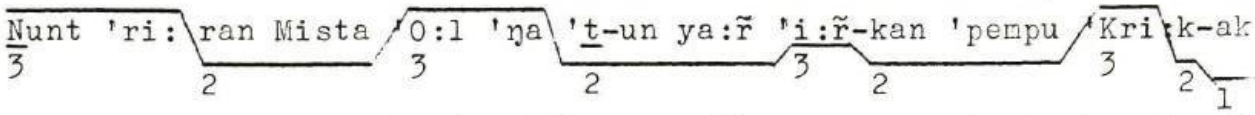


43 | medium | hortatory statement, with conviction | J



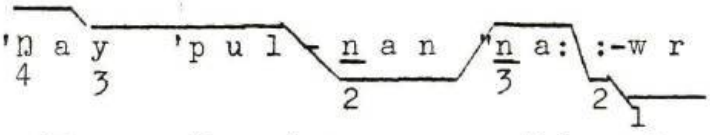
'you alone c o m e with me Bamboo creek - to

44 | fast | urgent advice, persuasive | J



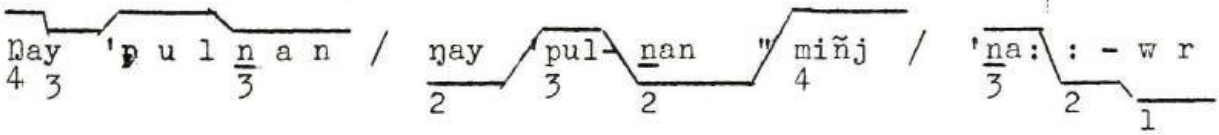
'you yourself Mr Hall with-me walk go up to Bamboo Creek

45 | slow | stative and routine | T



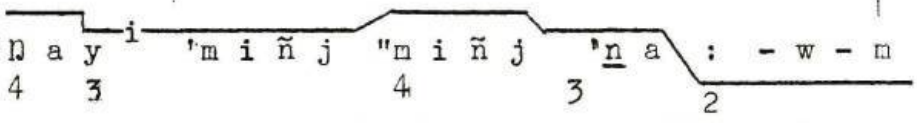
'I them-two did-see'

46 | slow-medm | Dull // enthusiastic (2 halves) | T



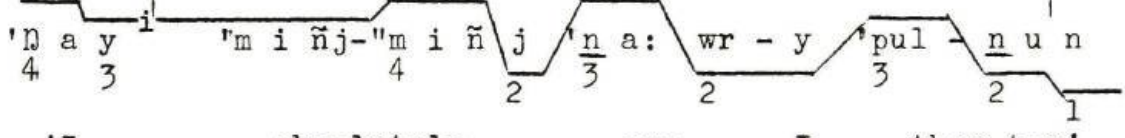
'I them-two I them-two truly did see'

47 | fast | persuadingly | T

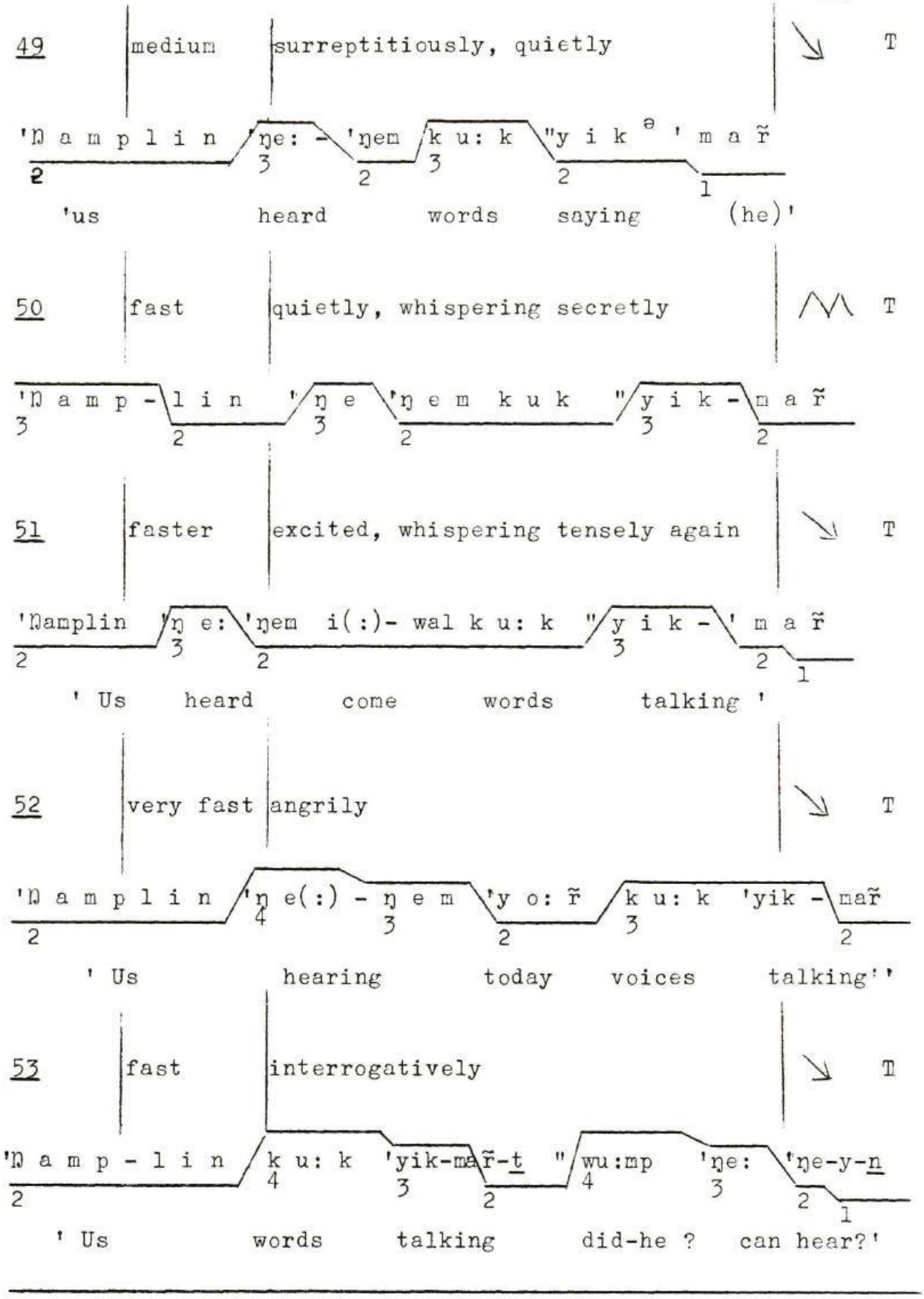


'I very truly did see'

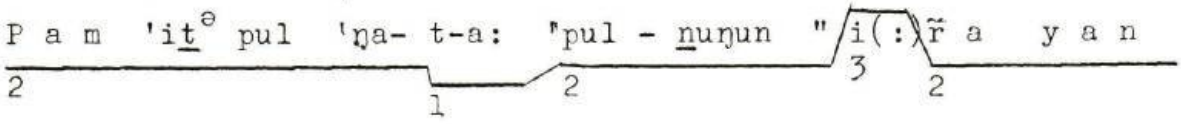
48 | fast | sincerely and in full | T



'I absolutely saw I them-two'

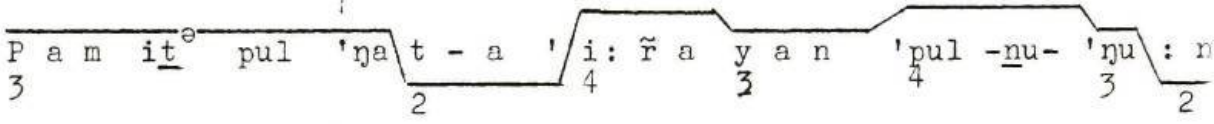

49 medium surreptitiously, quietly T
'ŋ a m p l i n 'ŋe: - 'ŋem k u: k "y i k ə ' m a r̃
'us heard words saying (he)'
50 fast quietly, whispering secretly T
'ŋ a m p - l i n 'ŋ e 'ŋ e m k u k "y i k - m a r̃
51 faster excited, whispering tensely again T
'ŋamplin 'ŋ e: 'ŋem i(:)- wal k u: k "y i k - ' m a r̃
' Us heard come words talking '
52 very fast angrily T
'ŋ a m p l i n 'ŋ e(:) - ŋ e m 'y o: r̃ k u: k 'yik - mar̃
' Us hearing today voices talking''
53 fast interrogatively T
'ŋ a m p - l i n k u: k 'yik-mar̃-t "wu:mp 'ŋe: 'ŋe-y-n
' Us words talking did-he ? can hear?'

54 | slow | ordinary, indicative, hesitating | ---> J

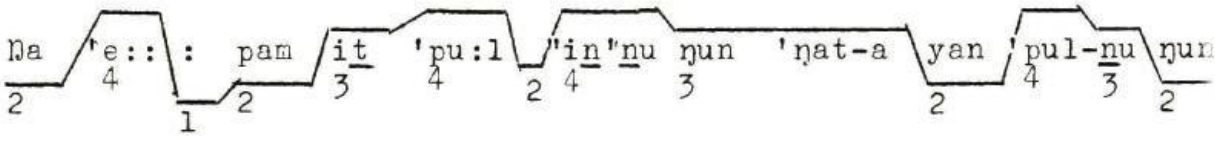


'man that they-2 fishing with-them-two to-there went'

55 | medium | amused, laughing, falsetto peak | ↘ J

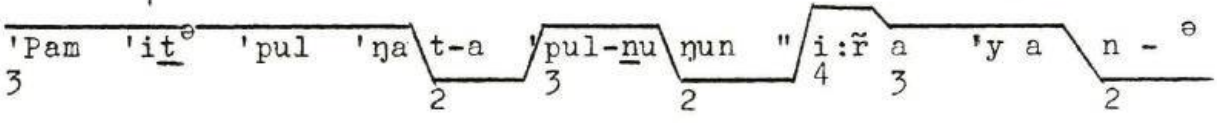


56 | medium | very surprised with falsetto peak | ↘ J



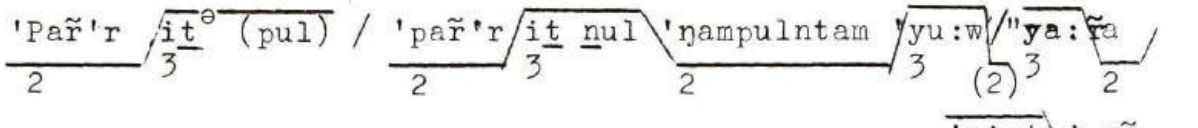
'Oh yes man that they-2 to-here fishing went with them-

57 | fast | angrily | ↘ J



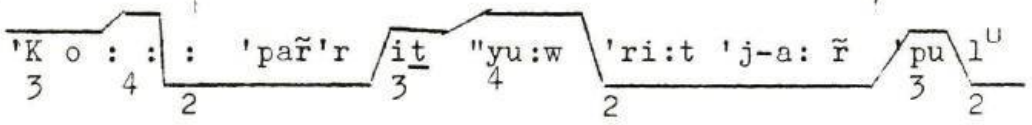
'man that they-2 fishing with-them-2 to-there goes'

58 | medium | factual statement, corrective | J

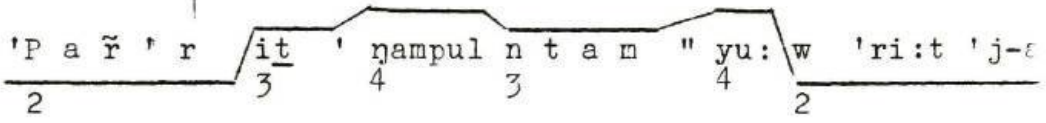


'Child that they-2 child that he from us away to there ran'

59 | medium | drawled, surprised and amused | J



60 | fast | angrily with chagrin | --> J



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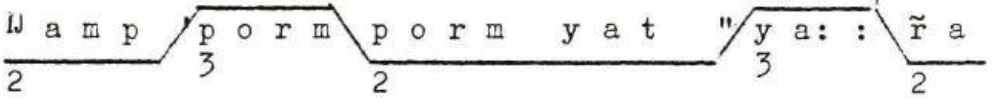
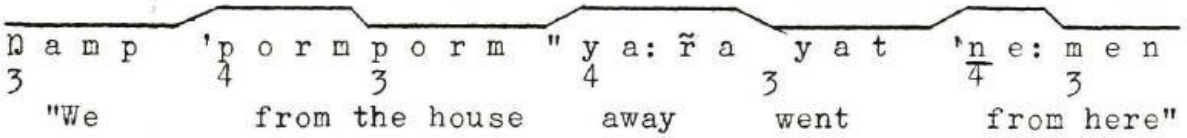
61 | slow | Factual, calm statement | T



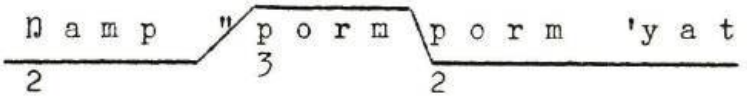
"We from the house went away"

62 | medium | confidential and eager | T



"We from the house away went from here"

63 | slow | repetitive and deliberate | --> T



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64 | slow | hesitant, stumbling, undecided, monotonous | ∧∧ J

'Paɾ̃'r: pa:n t 'it-ul wan 'na:nam-ul pam 'naŋanip 'naŋn-ul "wa:watr-y

'child girl that who saw-she father her looked I'

65 | medium | more confident | ∧/∧ J

'Paɾ̃'r pa:nt-'it-ul 'wa n-u l 'u lup pam 'naŋanip "na:-na m-ul

66 | fast | eager, conciliatory | ↘ J

' N u: l pam 'n a ŋ a n i p "n a ŋ n ' w a: ' w a t - r

'She f a t h e r h e r searched for'

67 | fast | mischievous, amused, falsetto coda | ∧∧ J

(laugh)

P a m "n a ŋ a n i p 'n a ŋ n ' w a: 'wa t-r H i h i !

68 | fast | angrily | ↘ J

P a m 'n a ŋ a n i p 'n a ŋ n " w a: w a t - r

69 | slow | heavily accented and deliberate | ∧∧ J

N u l 'pa'ɾ̃-an 'pa:n 't-u 'ŋi t-u l pam 'na ŋanip 'naŋn

'She child female that she father her sought; she saw (him)'

" wa:- 'wa t-r "na:-"nam-ul

5.1.7.4 Conclusions from auditory sorting

A study of the preceding speech samples indicates certain basic features of the intonation patterns. These will be treated under the following headings:[1]

(a) Stative calm intonational contour

(b) Interrogative patterning

(c) Contour used for emphasis

(d) The emotional loading of anger

(e) The emotional loading of pleasure

(f) The emotional loading of urgency and surprise

(g) Boredom, fatigue and hesitation

(h) Embarrassment, selfconsciousness

(i) Frame of mind / Rate of utterance

(j) T e r m i n a l s

(k) Comments on specific examples

(l) Concluding summary of auditory sorting.

---

[1] Several utterances are listed a second time, when they warrant comparison in another group.

(a) Stative calm intonational contouring

In SLOW rate of utterance

4	Calm, indicative statement	2 dr 3 2 [1]
61	Factual, calm statement	2 3 2 3 2
1	Calm, indicative, normal	2 dr 3 2 3 2
45	Stative, routine, calm	4 3 2 3 2 1
24	Calm, descriptive statement	2 3 2 1 3 2 1
37	Calm, declarative, factual	3 2 3 4 3 2 1

In MEDIUM rate of utterance

32	Calm, indicative statement, factual	2 3 2 dr
42	Statement of fact, neutrally	3 dr 2 dr 3 2 3 2
58	Factual statement (corrective)	2 3 2 3 2 3 (3) 2

No normal stative samples occur in FAST rate of utterance.

Comments

Examples listed above reveal several features of the contouring which characterises normal statement of fact:

(i) the contour begins on a medium level which may rise to high for emphasis on any word in the utterance.[2]

(ii) medium then alternates with high through the entire utterance.

(iii) the utterance terminates on the medium level and may drop to low for the last syllable or two.

(iv) fast speech is excluded from calm indicative statements in normal circumstances.

---

[1] dr = drone or drawl, in which more than 2 syllables are in sequence on the same pitch level.

[2] Note 45, 37 and 42 when high pitch is used for nuclear focus.

(b) Interrogative intonational contouring

In SLOW rate of utterance

36	Interrogative, amicably	3 dr 2 4 3 2 1
18	Normal interrogative, calm	3 2 3 2 3 2 3 2 3 2 1
35	Question, enquiringly	3 dr 2 4 3 2 1
22	Calm question, neutrally	2 3 2 3 2 3 2 3 2 3 2
28	Interrogative, patiently	3 dr 2 3 2 3 2 3 2

In MEDIUM rate of utterance

23	Surprised, interrogative	4 1 3 dr 2 3 2 dr 3 2 1

In FAST rate of utterance

3	Question, urgent and tense	3 2 3 2 4 3 2
53	Interrogatively	2 4 3 2 4 3 2 1
21	Angry question rebukingly	2 dr 3 2 3 2

Comments

(i) All samples show a fall in final pitch.

(ii) Conversely, no sample has a terminal pitch rise.[1]

(iii) An interrogative marker always occupies a nuclear position in the phrase/clause.[2]

(iv) Interrogatives, if not given high/very high pitch, always receive strong stress and/or phonetic length.

(v) Most samples begin with high pitch and then alternate with medium. (Focal words intrude with nuclear emphasis).[3]

---

[1] Other evidence confirms this.

[2] e.g. /wu:mp/ 'did (he)?' /ŋan/ 'what?' See section 5.2.7

[3] e.g. Surprise in 23 and focus in 53.

(c) Emphasis and deliberateness contouring

In SLOW rate of utterance

		/1 2 1
69	Heavily accented and deliberate	2 3 2 dr 3 2 3 2 3 2
34	Deliberate and heavy	2 dr 3 2 3 2 1
63	Repetitive and deliberate	2 3 2
9	Emphatic	2 3 3 2 3 2
6	Calm, deliberate	2 dr dr 1 dr

In MEDIUM rate of utterance

43	Hortatory, stative with conviction	3 2 dr 3 2 3 2 3 2 1
16	Imperative, (aspirated)	3 2 3 2 3 2
17	Imperative (and breathy)	3 2 3 2 3 2

In FAST rate of utterance

25	Dogmatic, assertive	4 2 1
5	Enthusiastic, emphatic	3 dr 4 2 3 2

Comments

(i) Slow speech begins on medium pitch level, medium on high and fast speech on very high (high onset).

(ii) Tone of voice was a characteristic of these samples, with the addition of breathiness showing (great) tension.

(iii) Contours show alternation of medium and high levels through to the terminal, which may drop to low pitch.

(iv) Focal words of very high pitch are lacking in normal deliberate speech which is itself focal.

(v) Articulation and aspiration together with loudness on focal points are exploited. Alternatively, length occurs in some samples, phonetically.

(d) The emotional loading of anger

Angry contouring does not occur in SLOW rate of utterance.

In MEDIUM rate of utterance

31	Angry, impatient	4 2 3 2 4 3 2 4 3 2
30	Bored, impatient, resentful	3 2 3 2 3 4 3 (2 3) 2

In FAST rate of utterance

15	Angry, very dominating	4 2 4 3 2 3 4 3 4 2
60	Angry with chagrin	2 3 4 3 4 2 dr
57	Angry	3 dr 2 3 2 4 3 2
68	Angry	3 4 3 4 3 2 1
2	Angry, voice raised	3 2 3 2 3 2 3 2
52	Angry, voiced raised, rapid	2 4 3 2 3 2
33	Annoyed, talking strongly, curtly	2 4 3 2 dr 3[1]

Comments

(i) The samples are characterised by high or very high pitch within the first two or three syllables.

(ii) Every sample registers a terminal fall in pitch except the last, No. 33.[2]

(iii) The emotive effect of anger causes considerable acceleration in the rate of utterance.

(iv) Extreme exasperation may cause the very high pitch level to recur in alternation through the utterance.[3]

(v) Voice quality, fortition, aspiration and the supra-segmental factors are exploited in the contouring.[4]

---

[1] The only case of a terminal upglide; emphasis of a focal word.

[2] This is due to ... Repetition of the antecedent nuclear peak for emphasis.

[3] A general characteristic is for initial syllables to be higher.

[4] One-syllabled words tend to have additional phrase stress.

(e) The emotional loading of pleasure

Only one example occurs in SLOW rate of utterance and the modulatory disposition is affected by embarrassment:

39 Laughing sheepishly 3 1 - 3 2 3 2 3 2 3 2 1 - 2 3 [1]

In MEDIUM rate of utterance

59	Drawled, surprised, amused	3 4 2 3 4 2 3 2
38	Sheepish, guilty, amused	2 dr 3 2 3 2 3 2 3 2 [1]
62	Confident and eager	3 4 3 4 3 4 3
55	Amused, laughing, falsetto peak	3 dr 2 4 3 4 3 2
46b	Enthusiastic	/ 2 3 2 4 3 2 1
65	(More) confident	2 dr 1 2 1 2 1 2 1 2 1

In FAST rate of utterance

7	Laughing sheepishly, gleefully	2 3 2 3 2 3 2 (2) 4 3
67	Mischievous, amused, falsetto coda	2 4 2 4 3 4 (laugh)

Comments

(i) A slow rate of utterance is largely excluded from this disposition of mind.

(ii) The voice level is mainly higher (in satisfaction).

(iii) Range of voice increases with the degree of pleasure communicated to the speech utterance.

(iv) All terminal contours fall, some peremptorily.

(v) Extremes of loudness often synchronise with high pitch.

---

[1] The element of sheepishness rather impairs the validity of these; notice also example 59.

(f) The emotional loading of urgency and surprise

In SLOW rate of utterance

14	Repeated with less urgency	3 2 3 2 1
26	Precise and definite	2 3 2 3 2 4 3 2
27	Explanatory with rebuke	3 dr 2 3 2

In MEDIUM rate of utterance

12	Imperative	3 2 4 2 3 2
51	Excited, whispering tensely	2 3 2 dr 3 2 1
13	Addressed to distant man, shouting urgently	4 2 4 3 4 3
56	Very surprised, falsetto peak	2 4 1 2 3 4 2 4 3 dr /2 4 3 2

In FAST rate of utterance

47	Persuading	4 3 4 3 2
50	Quiet, whispering secretly	3 2 3 2 3 2
66	Eager and conciliatory	3 2 3 2 3 2 1
44	Urgent, advising, persuasive	3 2 3 2 3 2 3 2 1
48	Sincere and whole-hearted	4 3 4 2 3 2 3 2 1

Comments

(i) The initial voice level of these utterances tends to be high, and in fast rate of utterance, very high.

(ii) Terminals of the more urgent samples rarely fall to low, but tend to remain at medium level of pitch.

(iii) Voice quality plays an extensive part in the communication of urgency and surprise.

(iv) The factor of additional phonetic length characterises samples of surprise and persuasion.

(v) Surprise shows a wide range of pitch and is marked by contours of 'glissando', especially in exclamations.

(g) The emotional loading of boredom, fatigue, Hesitation and indecision

In SLOW rate of utterance

54	Normal, hesitating, uncertain	2 dr 1 2 dr 3 2
41	Hesitating, mentally bored	2 dr 3 2 3 2 3 2
11	Sad, heavy-hearted, drawling	2 3 4 3 2 3 2 3 2 1 2 /3 2 1
64	Hesitant, stumbling, undecided, monotonous	2 dr 1 2 1 2 1 2 1 2 /1 2 1
40	Tired weary drone, fatigued	2 1 3 2 dr 1 2 1
10	Stative, doubtful, undecided with clipped coda	2 3 3 2 3 2 3
46a	Dull / ---	4 3 4 3 /

In MEDIUM rate of utterance

19	Blasé, restrained surprise	4 2 3 2 dr 3 2 3 2 3 2 1
8	Embarrassed, restrained (with snigger)	3 2 3 2 dr 3 2 dr /3 4
29	Bored, dull, disinterested	2 dr 3 2 3 2
20	Unbelievingly sceptical	3 2 dr 3 2 3 2 3 4 2 1
30	Bored, impatient, resentful	3 2 3 2 3 4 3 (2 3) 2

No samples of this type occur in FAST rate of utterance.

Comments

(i) The rate of utterance is reduced by factors of monotony and mental weariness.

(ii) Slower utterances all begin with medium pitch, which is consistent with the feeling of inertia.

(iii) The medium speed voice samples all show high to very high pitch within the first few syllables.

(iv) Objective boredom produces the 1 2 1 2 configuration which rises to 2 3 2 3 or 3 4 3 4 according to the degree of dissatisfaction felt by the speaker.

(h) Embarrassment, sheepishness

A final category groups several of the sentences by means of the concept of self-consciousness and embarrassment.

In SLOW rate of utterance

39	Laughing sheepishly	3 1 - 3 2 3 2 3 2 3 2 1 - 2 3 (snigger)

In MEDIUM rate of utterance

49	Surreptitious, quiet	2 3 2 3 2 1
38	Sheepish, guilty, amused	2 dr 3 2 3 2 3 2 3 2
8	Embarrassed, restrained	3 2 3 2 dr 3 2 dr /3 4 (snigger)
30	Bored, impatient, resentful	3 2 3 2 3 4 3 (2 3) 2

In FAST rate of utterance

7	Laughing sheepishly, gleeful	2 3 2 3 2 3 2 (2) 4 3 (laugh)
50	Quiet, whispering secretly	3 2 3 2 3 2

Comments

(i) The pitch levels almost exclusively alternate between high and medium.

(ii) Terminals almost all exploit a 3-2 fall, with occasional continued fall to level 1.

(iii) The only manifestation of very high pitch is in 30, where the note of resentment obviously raises the peak.

(iv) A complementary snigger after the terminals manifests in two utterances the tenseness of the informant as he responds with the rare pitch rise.

(i) Modulatory frame of mind / Rate of utterance[1]

Accented	S			Eager		M	F	Persuasive			F
Amicable	S			Embarrassed		M	F	Precise			F
Amused		M	F	Emphatic			F	Quiet		M	F
Angry		M	F	Enquiring	S			Rapid			F
Annoyed			F	Enthusiastic		M	F	Rebuking			F
Aspirated		M		Excited		M		Repetitive	S	M	
Assertive			F	Explanatory	S			Resentful		M	
Blasé		M		Factual	S	M		Restrained		M	
Bored	S	M		Falsetto		M		Routine	S		
Breathy		M		Fatigued	S			Sad	S		
Calm	S	M		Firm			F	Sceptical		M	
Chagrin			F	Frustrated		M		Secret		M	F
Clipped (coda)	S			Gleeful			F	Sheepish		M	F
Conciliatory			F	Guilty		M		Shouted (afar)		M	
Confident		M		Heavyhearted	S			Sincere			F
Corrective		M		Hesitating	S			Stative	S	M	
Curt			F	Hortatory		M		Stumbling	S		
Declarative	S			Impatient		M		Surprised		M	
Definite	S			Indecisive	S			Surreptitious		M	
Deliberate	S			Indicative		M		Tense		M	F
Descriptive	S			Interrogatory		M	F	Tired	S		
Disappointed			F	Laughing	S	M		Unbelieving		M	
Disinterested		M		Mischievous			F	Uncertain	S		
Dogmatic			F	Monotonous	S			Undecided	S		
Dominating			F	Neutral	S	M		Urgent		M	F
Doubtful	S			Normal	S			Weary	S		
Drawled	S	M		Opinionated		M		Whispered		M	F
Droned	S			(Ordinary	S)						
Dull	S	M		Patient	S						

(Table 37)

[1] The categories listed occur at the rate of utterance(s) symbolised by S (slow), M (medium) and F (fast). These elements comprise the attitudes, emotions and feelings noticed in the auditory appraisal of the speech samples.

(j) Terminals

A study of terminals reveals four main terminal-types. Variations of these are called allo-terminals.[1]

(i) The CONCLUSIVE type, in which levels fall in a sequence, sometimes gradually, sometimes precipitately.

(ii) The CONTINUATIVE type, where the terminal remains comparatively level, sagging slightly in some samples.

(iii) The ALTERNATING (pulse) type, in which 'see-sawing' of levels just suddenly terminates down the usual step.

(iv) The EMPHATIC type, in which usually a sequence of level syllables precedes a final rise in pitch, for a word in final focus, or a laugh of embarrassment.

Frequency

(i) Conclusive descending contours (29) marked ↘

(ii) Continuative level contours (7) marked -->

(iii) Alternating pulse contours (28) marked ⩘

(iv) Emphatic contours (6) marked ↗

Comments

a. The terminal is sometimes able to be predicted from the type of contour pattern within the whole utterance.

b. Some samples have terminals which might be either of two types: e.g. 6, 7, 8, 10, 38 etc.

c. All types of terminal contour are found at all three rates of utterance; range tends to correlate with speed.

---

[1] Variation results from degree and placement of stress, number of unstressed syllables in a level, rhythm of the utterance, slopes within a syllable, rate of utterance, order of words, and the morpheme initial accents present.

Modulatory disposition / Terminal contour

The CONCLUSIVE type of terminal contour occurs in samples of the following dispositions:

Actuality, amicability, amusement, anger, boredom, calm, conciliation, definiteness, dogmatism, description, dullness, eagerness, emphasis, enquiry, enthusiasm, excitement, explanation, impatience, interrogation, lassitude, normality, persuasiveness, precision, rebuke, resentment, sadness, scepticism, secrecy, stativeness, surprise, tenseness and urgency.

The CONTINUATIVE type of terminal contour occurs in samples of the following modulatory dispositions:

Actuality, anger, calm, chagrin, deliberation, indicativeness, hesitation, interrogation, normality, repetition, statement, surprise and uncertainty.

The ALTERNATING type of terminal contour occurs in samples of the following modulatory dispositions:

Actuality, accentuation, amusement, anger, aspiration, boredom, breathiness, calm, confidence, correction, deliberation, domination, languor, eagerness, embarrassment, emphasis, enthusiasm, excitement, exhortation, fatigue, heaviness, indicativeness, interrogation, guilt, hesitation, neutrality, normality, patience, persuasion, quietness, repetition, restraint, routine, scepticism, secretiveness, surprise, tenseness and urgency.

The EMPHATIC contour occurs with the following:

Amusement, annoyance, doubt, curtness, embarrassment, firmness, glee, indecision, mischief, restraint and stativeness.

(k) Comments on specific examples

Thaayorr speech is complex. All of an utterance is not necessarily relevant, for some etic features are non-pertinent. Basic variables may blend in different proportions within the time-magnitude continuum, producing unlimited potential variations. One or other of the pitch/length/loudness components may often be redundant in signalling emotion, attitude or focus. Each tends also to induce the others, but not always.

1. Voice quality is a feature which is always present, but has seldom been given equality as a fourth dimension. The Edward River kind of voice varies more from personality differences than for social or vocational status. Yet each voice may change within the same utterance, to manipulate, by hardening or softening, the perception of the hearer. Conversely, the (Aboriginal) hearer has developed a computer-like ability, after many years of practice in listening, to read intention 'by intuition'. The samples in 5.1.7.3 reveal this clearly.

In sample 25, an actual change of voice-quality confirms the impatience felt.[1] Two successive stops in /pal ko:r̃/ are noticably quite lenis.

2. Extra signals are often redundant, especially if a speaker wants his hearer to know without a shadow of doubt, what his intention is. A speaker may unwittingly use only one component, at a time, restrainedly building up effect after effect in a slow, but unmistakable progression. An expected pitch-rise may not eventuate, for the emotional effect is signalled by stress or length or voice quality, or a strategic pause. The Ta:yor̃ speaker uses all devices of rhetoric as the occasion demands, whether in story-telling or in tribal disputes: e.g. compare 2, 15, 33, 52, 57, 60 and 68.

---

[1] Apart from the omission of first word, pitch 4, and inversion,

Smaller pitch-changes mostly suffice for the calm unemotional indicative statements. Many of these changes are but one semitone apart.[1] Restrained intonational patterning requires that the hearer adapt his powers of definition to the reduced clues: e.g. samples 64, 65, 40 and 54.

A zero pitch change may actually be significant. Though absent, its expected presence signals the restraint of the speaker. Every factor in analysis has proved significant, though reasons cannot always be found. Even laryngealisation betrays an attitude by the collapse of the vocal pitch fundamental. Rate of utterance obviously plays a major part in transferring the state of the speaker's mind to his hearer: e.g. 3,53, 21 (interrogation); 5, 25 (emphasis); 7, 67 (fun).

3. Rate of utterance has been estimated to divide the samples into slow, medium and fast samples.[2] Faster speech signals anger, urgency, excitement or some dominant emotion in the mind of the speaker. Such emotional pressure builds up and is inhibited only by conscious restraint or restriction of phonation. This is usually recognisable in the changed voice-quality, tenseness or forced restriction of pitch levels.

4 Higher pitch levels signal usually some kind of elation. They often induce also very low levels: e.g. 53. Note also 25, 68, 48 and 56. From time to time, Aboriginals, at Edward River, deliver long emotive orations, achieving some cathartic benefit from the high-pitched utterances intended for a listening neighbour.[3] The peaks are then more noticably on the vocoids, with stops aspirated and syllabic nasals lengthened.

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[1] The full range is often in excess of one octave.

[2] Though some change their rate within the utterance because of some emotional stimulus: e.g. 46 (a) slow (b) medium.

[3] Such high-pitched oratory is often heard in the evenings.

Boredom has a depressive effect on pitch levels and stresses. Fatigue, dullness or monotony favour lower levels. Contrastively, for the appraisal of very fast utterances, the tape-recorder speed, when halved, served to confirm suspected pitch differences which were too fleeting to be analysed:[1]

e.g. very rapid utterances like 52, 6, 21 and 53.

5. Compensation of various kinds is common. Changes in voice quality may compensate for the restricted pitch levels of the tired speaker who cannot arouse himself to greater intonational variation. Final pitch drops tend to 'sag' lower than the earlier ones in an utterance: e.g. 40, where boredom lowered the pitch on /iřipař/ and stress occurred on the second syllable. Emphasis sometimes causes droning on one intonational level; such pitch changes being negligible, the modulatory effect substitutes compensatory stress (or length).

Syllable stress is sometimes reduced: e.g. in 30, boredom diminished the loudness in the first half of the sentence, but the nucleus is still distinguishable. Morpheme-initial stress is usually preserved in reduplicated syllables. Each syllable preserves an accent, one medium and one loud, in accordance with the suprasegmental pattern of the phrase.

6. Thaayorr differentiates between pitch-focus and loudness-focus. It is common for a stress on a particular pitch-level to make that level seem higher than it is. Stress in calm speech, tends to coincide with the normal morpheme-initial loudness, but 'phrase-stress' is that extra accent which makes one particular syllabic become the nuclear peak of the P-phrase or P-clause. In 28, normal syllable stress is lessened relatively by phrase stress requirements.

---

[1] A greater frequency difference is necessary to enable the human ear to perceive a pitch interval between two speech signals when they are both of high frequency than is necessary to enable the perception of the same pitch interval when both the signals are of low frequency.

Stress patterns require both auditory and mechanical analysis for a complete clarification of Thaayorr features.[1] Auditory impression is necessary to an interpretation of the mechanical, because psycholinguistic factors affect the final analysis of utterances. This language undergoes frequent stress fluctuation: e.g. In 40-2, where contrast occurs on certain compass-directional partials, in accordance with the change in pattern. In 44, stress rhythm alternates through strong-weak-strong-weak, where length in /ya:r̃/ is reduced to fit a pattern.

In 45-8, the slope before the nucleus is accelerated considerably. Such an increase in speed is common. So too, is the stress frequently placed on the initial segment of utterances, but with one provision. That the number of morpheme-initial stresses during the beginning of an utterance be minimized. (Brief samples need at least one weak syllable to contrast!)

7. The generation of transitional vowels is almost always predictable. They occur between consonants, both word-medially and at word borders, when those two consonants have 'incompatible' points of articulation. Numbers 12-3, 15-7, 39, 48-9, 54-5, 57-9 are but a few examples of non-phonemic vocoids. After a CVC syllable, the new phonetic syllable is 'CV.C^{V}, (unless C_3 were a nasal assimilating to 'its' stop.[2])

Thaayorr prefers a smooth flow of words within the phonological phrase/clause. Frequent use of transitional vocoids may obviate the occurrence of juncture and glottal stops on a phrase level of analysis.[3] The telescoping of word-strings by assimilation, may cause elision of word-initial consonants.[4] However, juncture does occur in 32 (and others). Notice also

---

[1] An intensity difference of 3 db is distinguishable to man.

[2] See section 5.1.3.2 (b).

[3] The syllable generated is mostly CV in shape and unstressed.

[4] See section 5.1.3.4 (iii).

that the generation of transitional vocoids in 49-53 allows a word-initial stress on **mono syllables**, strong on the first and weak on the non-phonemic second syllable.[1]

In 58-9, telescoping of words causes elision of C_1. Final consonants thus share the stress of following stressed syllables, but the C_1 is exchanged. In 43, the speaker corrects a mistake in accent and incidentally, an alternation from voiceless to voiced stop [p^h]am ['b^h]amboo which shows either, that the speaker preferred a voiced allophone on the stress, or he was using the voiced allophone in allomorphic alternation to the previous voiceless [p].[2] A further reference should be made to the frequent transitional vowels of pronouns like /ŋay/ 'I' (Ist person). These are a transitional (rather than vestigial) reappearance of vowels which may be found in some neighbouring dialects of Paman languages: e.g. 45 ff /'ŋay^i/.

Urgency or dogmatism may sometimes cause an accent to be placed on to every morpheme, thus slowing the rate of utterance. The shouted message of 13 (to distant hearer) is raised by approximately one pitch level. In 13-4, /ya:r̃/ loses some stress on its less urgent repetition. Juncture becomes more distinct and may even develop into a glottal stop.

8. Declarative, calm statements tend to require a steady pitch level. With anger, impatience and chagrin, e.g. 60, a wide range of pitch eventuates as the offended speaker might be expected to respond in conveying his emotional disturbance. In 57, the strong release of a nasal generates a transitional [ə] because of the repressed emotion of anger. And in 30, impatience causes a long nasal and a higher nucleus.

---

[1] Note this also in 45-8 and 57. In 54-5, the vowel appears, but in 56, it disappears before the stressed /'pul/.

[2] Which appeared mistakenly without its expected word-initial accent in the place-name 'Bamboo Creek'.

Humour may cause extenuation of levels with extreme leaps, up and down. A falsetto pitch occurs in 55-6. In 55, length occurs with stress on the terminal /-ŋu:n/, (laughing). Surprise in 56, may cause extensive leaps and glides, but in 57, angry and rigid pitch-frozen words preserve the morpheme-initial stress for effect. /ŋan/ has high pitch in 26, and the following /wu:n/ has compensatory length [wu::n], since the stress on /ŋan/ is redundantly induced by pitch.[1]

Some other factor may condition a rise in pitch. Morpheme-initial stress, especially on long vowels in that slot, recurrently induces a rise of one level. The dictational emphasis of 69 shows the negation of this feature, as an exception to the rule. So too, in 34, juncture after every word signals the deliberate, heavy mood which reduces the expected pitch level of the nucleus to high.[2] An emic terminal rise in 33 is focus on 'that', plus stress, /$\underset{2}{\underline{\text{tan pam}}}\,|\,\overset{}{\underset{3}{\underline{\text{'it}}}}$/.

9. This thesis adopts the unit of one mora for the average length of a short vocoid. Long vowels vary between $1\frac{1}{2}$ and $2\frac{1}{2}$ mora. But while lexical length is relatively stable, prolongation of vocoids (and contoids) is a common phonological feature for semantic modification.[3] Up to 5 mora in narration may occur in accordance with psycholinguistic requirements, e.g. in 18, length on /pe:l:n/ signals hesitation.

Utterance emphasis may condition 'length', e.g. focus or emphasis. In 37, length dominates stress on the syllabics /ko::p "ri:::ran/ before /'mu:ŋ'kaɽ̃/ 'ate, because /'ri:ran/ 'alone' has come into focus. (cf 38 for focal length.) In samples 9-10, /"ro:ñ'jeyr/ 'bumped himself', contrasts minimally with /"ro:ñjeyr/ for the former focuses on /-ey-/ 'himself'.

---

[1] Stress and pitch mutually tend to induce each other, but not necessarily so; similarly for stress and length.

[2] A drawled intonation promotes loss of juncture in 'laxness'.

[3] cf allolexemes [Tom] [ʔtomiʔ] [to::mi::y] [tomi::yeʔ] [Tomas].

10. Breathiness also, may provide emphasis: e.g. 16-7.[1] Guttural constriction communicates its message through voice-quality, but is different from the additional aspiration of stops.[2] In 37-9, emphasis employs length, rather than stress (which is weak). But the drawled /'mu:ŋ'ka:r̃/ 'ate' has length emphasis in the second syllable signalling 'terminal' amusement. (cf. [te:re:k^{h}] for /te:rk/ 'return'.)

Edward River speakers exploit paralanguage for effect. Gestures include head-turning, muscular tension, embarrassed flinching, onomatapoeic interjections and kinaesic gesticulation of psycholinguistic interest. Yet such motions are directly related to speech, particularly when accompanied by a snigger which shares terminal pitch contour: e.g. 7, 8, 39, 67.

11. Emotional tension diversely influences P-patterns. In 31, frustration reduces the speed of utterance to medium, but lengthens the vowels and widens the pitch intervals while adding more stress points. Hesitation, in 54, produces a stammering effect as it lengthens a normally short syllable /'ŋa.t-a:/ 'for fishing'. The anger of 51-2 provides a minimal stress contrast between /'ŋe:'ŋem/ 'heard' and /'ŋe(:)ŋem 'yo:r̃/ in which the stress on the verb root is transferred to the modifier. Such doubling of the number of syllables indicates the importance of the stress-rhythm concept to Thaayorr speakers.[3]

Auditory perception is subject to individual interpretation. In 24, /'naŋ'kun/ 'for you, yours', has two equally stressed morphs, but the second seems weaker through pitchdrop (2-1). In the other case, /ŋan/ appears to have stress, but it is pitch which gives it prominence over /wu:n/.

---

[1] Compare whispering in 50 and 51.

[2] Contrast the lenition of stops, or reduction of [ʔ] at speed.

[3] Focal stress can reduce normal P-stress; words may need to be heard in other contexts to ascertain emic patterns.

(1) Concluding summary of auditory sorting

Some of the main factors effecting suprasegmental modulation of the normal Thaayorr speech-flow are:-

(i) Attitude of mind, stemming from the social/ethical stance of the speaker: e.g. a furtive outlook in 50 shortens lexically long vocoids (in 49); /ŋe(:)m/ and /ku(:)k/, and reduces the voice to a breathy whisper. Again, in 40-2, a minimal trio (progressing from weariness to boredom and to stative neutrality,) manifests subtle pitch rises, increased speed of utterance, clearer enunciation and improved voice quality.

(ii) Variety of mood can alter speech variables over a wide-ranging continuum. Extremes change from grunts, interjections and chanting, to shouts, drawls or falsetto pitch leaps.

(iii) Stress/rhythm correlation by which phrase rhythm may dominate word patterns of length and stress: e.g. In 40, /'yan-ul "iñi-pañ/ shows strong-weak-strong-weak alternation; so also does 42. But in 41, the stress is transposed because of the preceding environment; 41 /ŋul (pause) i"ñi-pañ/ where the unstressed 'pronoun + pause' function as 'strong' to preserve the S-W-S-W alternation. Thus, stress was rhythmic on /iñi-pañ/, not lexical.[1]

(iv) Compensatory fluctuation, whereby stress/pitch/length show interplay as one or the other, (or two of them,) signal the effect desired by the speaker. Maximal redundancy occurs when all three plus voice quality affect the same syllable: e.g. 48-53 give analogous contrast for attitude and emotion.

(v) Calm indicative statement, emotionally neutral, often demonstrates the normal kind of speech-flow. It is lexically more regular, as in 24 and 32.

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[1] Sample 51, in which lexical length reappears (missing in 50), and needs the addition of /iwal/, introduced by the informant, not only for syntactic, but also for stress-rhythmic balance.

(vi) Emphasis/focus cause departures from the norm. Even interrogation depends on the feature of emphasizing the specific 'question-marker' used by the questionner. In 53, the morpheme /wu:mp/ is both stressed and raised in pitch. If the question is obviously so, then any morpheme may be put in focus by suprasegmental modulation. Samples 18 and 22 show normal interrogation, but in 19-21, other words are in focal distinction. Minimal contrast in 18-9, occurs with /"wu:mp | 'yik-r/ and /wu:mp | "yik-r/, because of a different emphasis in each, and the addition of surprise in 19.[1]

(vii) Emotional loading exploits every possible avenue of modulation in Thaayorr speech-flow: e.g. In 11, sadness causes drawling of the descending slopes and lengthened the vowels. Conversely, in 52, the angry speaker has more rigidity, tenseness and glottal constriction.

Finally, modification of the speech utterance of the Aboriginal speaker may be likened to the outflowing of a liquid. The informant has a 'tribal' voice quality or timbre, which becomes 'individualised' as it leaves his vocal organs. He may vary the flow by modulation of the variables which come under his 'unwitting control':

a. Voice quality to suit the mood.
b. Loudness of particular phonetic syllables.
c. Length of phonetic segments.
d. Pitch of the voice through about 2 octaves.
e. The pause between parts of an utterance.
f. Gestures of any part of the body.
g. Choice of lexeme to suit the occasion.
h. Terminal contour.
i. Muscular stricture.

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[1] Compare also 27, 28: /ŋan "wu::|n/ (3 | 2) and /"ŋah:-ul | 'wu:|:n/. (3 | 2 | 3 | 2)

5.1.7.5 Phrase/clause analysis by mechanical means

Eleven analyses of speech utterances follow. They are a specimen of 49 analyses obtained from 100 photographs.[1] Three points require elucidation concerning these charts:

(i) Decibel readings show the ratio between any two acoustic levels after fixing the highest peak at -0 db.

(ii) This study confirms the unit of the 'mora' as a convenient measure of phonetic length. It is the average length of one short phone. (One average long phone equals $1\frac{1}{2}$ to $2\frac{1}{2}$ mora.)

(iii)The charts include measurement of segmental onset-slopes, nuclei and coda-slopes by adjustments already stated.[2]

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[1] Cited in section 4.2.

[2] Mentioned in footnote 3 of section 4.6 on page 37.

Rate of utterance

The following comparison of utterance speed shows that the constituent of phone-length may be valid for separation of different samples (see Table 37 on page 176):[1]

Male			Female[2]	
Slow	Medium	Fast	Slow	Fast
13.7cs	8.7cs	6.7cs	12.3cs	10.3cs
13.4	8.6	6.7		
13.3	8.5	6.6	12.7	11.7
13.1	8.5	6.6		
12.1	7.7	6.5		11.8
11.4	7.6	5.3	12.9	
11.3	7.5	4.9		12.2
11.1	7.3	4.7	13.3	
10.8	7.3	4.2		12.3
9.9				
120.1cs	71.7cs	52.2cs	51.2cs	58.3cs
12.0cs	7.9cs	5.8cs	12.8cs	11.7cs

Average phone lengths compared:

Comments:

(i) The ratio of length phenomena is maintained whatever the rate of utterance for mood/personality/sex.[3]

(ii) Subjective analysis is preferable to mechanical, for psycholinguistic reasons.

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[1] These results are based on a mere 38 samples processed.

[2] Unfortunately, only one (slow-voiced) female informant.

[3] Similarly, syllable length etc might be investigated.

Film 15, utterance 73

(Teddy, doubtful, undecided, laughing)

/Nul 'te:p'l-ak "ro:ñj-e-yr, a:/

'He on-table bumped-himself; ha!'

Phoneme prominence (Table 39)

	N-	u-	l	t-	e:-	p-	^{U}	l-ak	r-	o:-	ñ-	j-	e-	y-	r	'a:
Frq	1	9	0	130	140	160		140	140	150	140	130	100	140	80	Hz
P-ch					+1.3	+2.3			+1.2				+5.8		$_{v}$	
Int			-6.6				-2.3				-1.2	-1.3	-4.5		-9.7	st
	-5	-3	-6		-5	-1	-0	-3	-3	-5	-5		- 4		- 6	-6 -11
Dur			$_{v}$													
	.2	.5	.5	.1	.4	.1	.5	.3	.3	.5	.2	.6	.2	.2	.3	.4

Pitch-range

15. 6 semitones

Intensity-range

(-) 11 decibels

Av-phone-length

1 phone = 12.744 cs

Auditory prominence

'N u: l: t e: p u 'l a k 'r o: ñ 'j e y r a:
3 2 2 2 1 2 1

Comments:

Pitch: Emic rises from te:- to p^{U} and -je- to -yr-
Emic falls from Nul to te:-, from $-p^{U}$ to -lak, from -ro:ñ- to -je- and from -jey to -r which is a falling syllabic consonant on the 'glide' slope.

Loudness: Peaks are on -u-, ($p-^{U}-$,), -lak, ro- and -je- show distortion from normal through indecision.

Length: Phrase-initial -u- is 2 mora after a nasal; (t)e:- and (r)-o: are both long; (-y)r is 1½ mora.

General: The P-nucleus by auditory impression is "ro:ñ- which gains over 'te:p'l-ak by length and phrase rhythm. Stress attenuates short Vs; -l has long coda slope; -l- a short onset slope.

Film 15, utterance 74

(Teddy sadly)

/'Nul 'te:p l-ak "ro:ñ 'j-e-yr/

'He on-table bumped himself'

Phoneme prominence

N-	u-	l	t-	e:-	p	l-	a-	k	r-	o:-	ñ-	j-	e-	y-	r
Frq															
170	190	150	160	180	170	150	140	v	1	4	0	130	140	120	250	v	80
PCh															
+1.9		+1.1	+2.1									+1.3		+12.7	
	-4.1				-.9	-2.2	-1.2			- 1.3			-2.7		-19.7
Int															
-8	-5	-7	-½	-0		-8	-1	-15	-	.0	v		-	½	-4	-3	v
Dur															
.3	.3	.2	. 3	.3		.2	.5		.3	.4	.5	.2	.2	.2	.2		

Pitch-range

19.7 semitones

Intensity-range

15 db

Av-phone-length

1 phone = 13.3 cs

Auditory prominence

N u l "t e: p 'l a k "r o: ñ j e y r

3 2 3 2 2 4 1

Pitch:

Emic rises from n- to -u-, from t- to -e:-, and from -e- to -y- .

Emic falls from -u- to -l, from -p- to -l-, from -o:- to -ñ-, from -j- to -e- and from -y- to -r.

Loudness:

Peaks are on -e:-, -a-, -o:- and -e-.

Length:

Stressed vocoids -u- and -e:- are 1½ mora; -o:- is 2 mora and -e- is only 1 mora.

General:

Nasals and r are longer than y or l; stops are short initially and fused to their vocoid, but delayed in word-medial release. Vowels are at the peak of their syllable.

Film 15, utterance 75

(Imperatively)

/Nun t^{U} pal "ya:r̃ ŋa't-un/

'You come walk to-me'

Phoneme prominence

	N-	u-	n-	t-	^{U}	p-	a-	l	y-	a:-	r̃	ŋ-	a-	t-	u-	:	n
Frq	170			130		160	170	150	150		140 130	140		225			v
PCh						+3.6	+1.1					+1.3	+ 8.2				
		- 4.6					- 2.2			-1.2	-1.3						
Int	- 9			- 8		-1½	-1			- 0			- 5		- 5	-4	
Dur	.2	.2	.2	.2	.3	.2	.3	.2	.1	.3	.2	.2	.3	.2	.3	.4	.4

Pitch-range

9.5 semitones

Intensity-range

(-) 9 db

Av-phone-length:

1 phone = 8.424 cs

Pitch:

Emic rises of 3.6 st from -nt^{U} to pa-, only 1.3 from ya:r̃ to ŋa-, and 8.2 st from ŋa- to -tun.

Emic falls of 4.6 st from Nun- to -t^{U}, 2.2 st through pal, 2.5 st through ya:r̃ and terminally.

Loudness:

Nuclear peak is at ya:r̃, having begun in pal. A minor peak occurs on (ŋa-)'t-un.

Length:

All short consonants of 1 mora, but ŋ- is 1½m. Final -n is 2 mora, terminally. 'Geminate' -t-t- is phonetically long, being also intervocalic, stressed and unreleased till peak. Semivowels fuse to their vocoids; flaps of /r̃/ are spattered down the coda slope ½ mora apart. Vocoids are 1 m. including the transitional vowel. /-a:-/ is only 1½ m, and final -u- and -n are both long in the terminal syllable.

Auditory prominence:

N	u	n	t^{U}	'p	a	l	"y	a:	r̃	ŋ	a	't(t)	u	n
3			1	3			2			2		4		2

Film 15, utterance 76

(To distant man, shouting imperiously)

/Nunt^{U} pal 'ya:r̃ 'ŋa"t un/

'You come walk to-me'

Phoneme prominence

N-	u-	n-	t-	^{U}	p-	a-	l	y-	a:-	r̃	ŋ-	a-	t :	-	: -	u-	n:
Frq																	
120	2 6 0		190		2 5 0			200	160-180		180	225	2	2	5		v
PCh																	
+13.4			+ 4.7							+2.1	+ 3.9						
	-5.4						- 3.9		-3.9								
Int																	
-20	-10		-12		-8	-10	-8 -10	-6	-5 -4	-6 -12		-10	-7	-0		-1	v
Dur																	
.3	.2	.5	.2	.4	.2	.2	.2	.2	.5	.3	.3	.3	.6		.2	.2	.6

Pitch-range:

13.4 semitones

Intensity-range:

(-) 20 db

Av-Phone-length:

1 phone = 9.612 cs

Pitch:

Emic rises are 13.4 st from n- to -un-, 4.7 st from -t^{U} to pal, 2.1 st from ya:r̃ to ŋa- and 3.9 from ŋa- to -t-un.

Emic falls are 5.4 st from nun- to -t^{U}, 3.9 st from pal to ya:-, 3.9 st through ya:r̃ and again terminally.

Loudness:

Secondary peak on ya:r̃ and main nucleus on (ŋa-)"t-un.

Length:

Nasals are all longer than other contoids, being 1½ mora, and the final nasal coda being 3 m. (imperiously). -a:- is 2½ m. on the peak, but the nuclear -t-:- bears the principal attenuation while unreleased before -u:-. The transitional vocoid -u- appears to bear double length, perhaps in suspense after the unreleased intervocalic -t::-. The trilled vibrant -r̃- is only half as long as -t::-.

Auditory prominence:

N	u	n	t	^{U}	p	a	l	'y	a:	r̃	ŋ	a	"t	u	n
3		4	3	4			3		2			3			2

Film 15, utterance 77

(less urgent than 76)

/Pal 'ya:r̃ 'ŋa"t-un/

'Come walk to-me'

Phoneme prominence

P-	a-	l	y-	a : -	r̃	ŋ-	a-	t-	(t)	-	u-	n
Frq												
2 2 5	260		2 2 5		200-150	2 2 5			2 0 0		1 3 0	v
PCh												
+ 2.5		- 2.5		- 2.1	-4.9	+7.0		- 2.1			- 7.5	
Int												
-5	-7	-4 -8	-3	-2	-6			- 7 v			- 0 -2	-1 v
Dur												
.2	.3	.2	.1	.2 .2	.2	.4	.4	.1	.6 .1		.2	.2

Pitch-range: 12.1 semitones

Intensity-range: (-) 8 db

Av-phone-length:

1 phone = 8.343 cs

Auditory prominence:

P	a	l	'y	a:	r̃	ŋ	a	"t	u	n
3		4	3		2	3		2		1

Pitch:

Emic rises are from Pa- to -al and from ya:r̃ to ŋa-
Emic falls are from Pal to ya:r̃, from ya:- to -r̃, from ŋa- to -tun and phrase-finally.

Loudness:

Two peaks occur, first on thevocoid of ya:r̃ and the nuclear climax on -tun. The lowest trough is between Pal and ya:r̃, matched almost by that of -t-$_v$ -t-.

Length:

Vocoids are rather longer than their lexical length; phrase-initial -a- is 1½ mora and ŋa- is 2 full mora.
Contoids: y- seems short in its fusion with -a:-, but ŋ- is long, 2 mora, and the unreleased -t:::-bursts on to its following nuclear vocoid.

Film 15, utterance 78

(Teddy, angrily)

/'Nun t^{U} 'pal 'ya:r̃ 'ŋa-"t-un : : : : /

'You come walk to-me'

Phoneme prominence

-15

N-	u-	n-	t^{U}	p-	a-	l	y-	a:-	r̃	ŋ-	a-	t-	(t)	- u	:	n	:	:	:	:	:	:
Frq																						
270	225	140		275	250	200			190	225		200		300	200	170	200	250	150			
PCh			+11.7							+ 2.9			+ 7.0				+2.8	+3.9				
- 3.2		-8.2		-1.7	-3.9	- .9				-2.1				-7.0	-2.8				-8.8			
Int																						
- 6		-8		- 7		-5	-3	-5	-6	-7	-8			- 0	-1	-3	-5	-4	-5	-8	-6	-10	-6 -13 -10
Dur																						
.2	.1	.2	.2	.1	.4	.4	.1	.2	.1	.3	.1	.3	.1	.0	.2	.6	.5	.5	.6	.3		

Pitch-range:

13.2 semitones

Intensity-range:

(-) 15 db

Av-phone-length:

1 phone = 10.8 cs

Auditory prominence:

N u n t^{U} p a l y a: r̃ ŋ a t - (t) u : n : : : : : :

4 3 2 1 4 3 2 3 2 4 2 3 2 3 1

Pitch:

Emic rises are 11½ st from -t^{U} to pal, 3 st from ya:r̃ to ŋa-, 7 st from ŋat- to -tu-, and two pulses of +3 st on the nasal. Emic falls are 11½ st from Nu- to -nt^{U}, 6½ st through pal to ya:r̃, 2.1 st from ŋa- to -t-t- and 9.8 st from tu- to -n::::

Loudness:

Three minor peaks of loudness occur, on ya:r̃, and on the sustained nasal, but the nuclear peak of loudness is on -tu-.

Length:

The vocoid -u- between nasals is short (½ m.), but -al in pal is extenuated by phonetic length, pa:l: It is hard to see the border between ŋ- and -a in ŋatun. But the intervocalic -t- on the nuclear peak is actually 4 mora + 1 = 5m. -n:n:n:n The attenuated nasal with peaks and troughs is S-W-S-W with 4 chest pulses expressing anger of 9 mora duration.

Film 15, utterance 79

(imperatively)

/'Nun t$^{\cup}$ 'na 'ŋ-un ya:-r̃ "i:-r̃ - a/

'You to-him walk go there'

Phoneme prominence

	N-	u-	n-	t$^{\cup}$	n-	a-;	ŋ-	u-:	n	y-	a:-	r̃:	i:-	r̃-	a::
Frq	225			200	160		200	225	200	190		140	200-300	190	120
PCh						+3.9	+2.1		-2.1	-.9	-5.3	+6.2	+7.0		
Int		- 2.1		- 3.9										-7.9	-7.9
Dur	-	6	-15	-5	-10	-6	-3	-5	-	3	-6	-4	- 0	-2	-1 v
	.1	.2	.2	.2	.2	.6	.2	.4	.2	.1	.4	.4	.4	.3	.6

Pitch-range:

15.86 semitones

Intensity-range:

(-) 15 db

Av-phone-length:

1 phone = 8.2 cs

Auditory prominence:

'N	u	n	t$^{\cup}$	'n	a	'ŋ	-	u	n	y	a:	-	r̃	"i:	r̃	a
3		2		1		2		3	2	2			1	4	2	1

Pitch:

Emic rises are 6 st from na- to -ŋu- and 13.2 st from ya:r̃ to i:r̃a.

Emic falls are 6 st from Nunt to na- and 3 st from -ŋun to ya:-; then 5.3 st within ya:r̃ and 15.86 st , the whole range, within the coda of the last word, i:-r̃-a: .

Loudness:

Three small peaks occur, on na-, -ŋu- and ya:-, but the nuclear climax is on i:- in the final word of the utterance.

Length:

Both vocoids in naŋun have double length, non-lexically, conditioned by minor accents. Ya:r̃ and i:r̃-a: both have extra length on the sounds contiguous to the nuclear peak. The long final -a:: conveys the imperative, assisted by 'voice'.

Film 15, utterance 80

(imperatively, same as 79)

/'Nun t^{U} 'na 'ŋ-un ya:-r̃ "i:-r̃-a/

'You with-him walk to-there'

Phoneme prominence

	N-	u-	n-	t	n-	a-	ŋ-	u-	n	y-	a:-	r̃ :	i : -	r̃ :	- a:
Freq	225			190	170		225			190		150	210	150	
PCh					+ 4.9							+ 5.8			
		- 2.9		-1.9					-2.9		- 4.1		- 5.8		
Int		- 6		-18	-5		-6		-9	-4	-3	-4 -6 -3	-0 -6	-3	v
Dur	.1	.2	.1	.2	.1	.1	.1	.1	.2(.3)	.2	.4	.4	.3	.3	.5

Pitch-range: 7.02 semitones

Intensity-range: (-) 18 db

Av-phone-length:

1 phone = 6.48 cs

Auditory prominence:

N	u	n	t	'n	a	ŋ	u	n	'y	a:	r̃	"i:	'r̃	a
3		2		3					2		1	3		2

Pitch:

Emic rises are 5 st from na- to -ŋun, and nearly 6 st from ya:r̃ to i:r̃-a.

Emic falls are 4.8 st from Nunt to na-(ŋun), 3 st from -ŋun to ya:r̃, 4.1 st through ya:r̃, and finally, 5.8 st through the final word, i:-r̃-a: .

Loudness:

Minor peaks occur on Nunt, na-(ŋun) and ya:r̃, but the nuclear climax is undoubtedly on "i:r̃(-'a:). Note the final contoid.

Length:

Nasals in Nunt are shortened to ½ m. each, and naŋun has every segment clipped to ½ m. (except final /n/. Conversely, ya:r̃ i:r̃a is extenuated (except y) to intensify P-nucleus. Note the extra number of significant Intensity points, both being caused by the 'imperative' vocal tone of the utterance.

Film 15, utterance 81

(Teddy, declarative and calm)

/Pal ko:r̃ 'ulp 'naŋ"k-un "ŋan "wu:n/

'Behind that to-you what lies'

Phoneme prominence

P-	a:	l:	k-	o:-	r̃	u-	l-	p	n:	a:	ŋ:	k:	u-	n	ŋ:	a:	:	n	ə	w:	u:	n:
Frq																						
190			160		130	250	190		140	275	140	v		120		180	190	130	140	280	200	v
PCh																						
	-2.9				+11.3				+11.7					+7.0		+.9		+1.3	+12.0			
				-3.6		-4.7	-5.3			-11.7	-2.7						-6.6			-5.8			
Int																						
-7		-7½	-5	-7	-4	v		-6	-7	-6	v	-4	v	-15		-7		-6		-3	-0	-6 v
Dur																						
.1	.4	.5	.2	.6	.3	.2	.1	.1	.5	.4	.3	.3	.2	.2	.6	.6	.2	.1		.4	.6	.4

Pitch-range:

14.67 semitones

Intensity-range:

(-) 15 db

Av-phone-length:

1 phone = 11.07 cs

Auditory prominence:

P a l 'k o: r̃ 'u l p n a ŋ 'k u n ŋ a n "w u n

3 2 1 4 1 2 4 ½ 1 3 2 4 2 1

Pitch:

Emic rises are 11.3 st from ko:r̃ to ulp, 11.7 st through naŋ(kun), 7 st from (naŋ)kun to ŋa n), 12 st from ŋan towun. Emic falls are 6.5 st from Pal to ko:r̃, 10 st from ulp to naŋ-, 14.4 st from naŋ- to -kun, 6.6 st through ŋan and 5.8 st through the final word, wun.

Loudness:

Minor peaks are on ko:r̃, ulp and (naŋ)kun; nucleus on wu:n.

Length:

The declarative calmness adds length to many segments; short vocoids (ŋ)a(l), (n)a(ŋkun), (ŋ)a(n) and (w)u(n) become long and long vocoids become longer in (k)o:(r̃) and (w)u:(n). Contoids l, r̃, n, ŋ, k, w, and n, become long and the word /ŋan/ is greatly attenuated to [ŋ::ɑ::nᵊ] before /wu:n/.

Film 15, utterance 82

(Impatiently)

/'Ulp wu:n pal 'ko:r̃/

'That lies behind'

Phoneme prominence

	U-	l-	p	w-	u	:	-	n	p-	a-	l^{e}	(g)	-	o:	r̃	:
Freq	2	2	5	1	7	0		140	260	130	110	2	2	0	170	
PCh			- 4.9			- 3.4		+ 10.7	-12.0	-2.9	+ 12.0			- 4.5		
Int	-	0	-15	-	½	-1		-5	-4	-3	-4-5	-4	-3	-2	-5	-10
Dur-n	.3	.2	.2	.2	.3	.1		.2	.2	.2	.1	.4		.4	.2	.2

Pitch-range:

14.89 semitones

Intensity-range:

(-) 15 db

Av-phone-length:

1 phone = 7.479 cs

Auditory prominence:

"U l p 'w u: n p a l 'k o: r̃

3 2 1 4 1 3 2

Pitch:

Emic rises are 10.7 st from wu:n to pal, and 12.0 st from pal to ko:r̃.

Emic falls are 4.9 st from Ulp to wu:n, 3.4 st through wu:n, 12.0 st plus 2.9 st through p-a-l^{e} and 4.5 st terminally.

Loudness:

The nucleus is phrase-initial on "Ulp. All syllabic vocoids then share a minor accent, i.e. -u:-, -a- and -o:-, which appears to convey the stress pulse of 'impatience'.

Length:

The nuclear U- is 1½ mora through stress, and all other phones are 'regular' except the last morpheme, /-ko:r̃/, where the fricativised velar stop is long and the terminal -r̃ is also lengthened to 2 mora.

Film 15, utterance 83

(Patiently)

/Pal ko:r̃ naŋ k-un ulp ŋan wu:n/

Phoneme prominence

	-a-	l	ɐ	ɛ	o:-r̃	n-	a-	ŋ-	k-	u-	n	u-	l-	p	ŋ-	a-	n	w-	u	:	- n
rq																					
	.60	160		1 6 0		2 8 0			275		250	190		280	130	190	140	275		260	v
Ch																					
				+ 9.7								+ 6.7		+ 6.6			+11.7				
								- .3	- 1.7	-4.7			-13.3		-5.3					-.9	
nt																					
	-17	-15		- 7	-20	-15	-12	-15	-4	-10	-12	-4	-3		-5	-5		-4		- 0	v
ur																					
	2	.2	.2	.2	.3	.5	.2	.1	.2	.6	.8	.6	.6	.2	.1	.7	.5	.5	.3	.2	.6	.3

Pitch-range:

13.285 semitones

Intensity-range:

(-) 20 db

Av-phone-length

1 phone = 11.772 c s

Auditory prominence:

P	a	l	'k	o:	r̃	n	a	ŋ	'k	u	n	'u	l	p	ŋ	a	n	"w	u:	n	:	:
2						3						4			3			2			1	

Pitch:

Emic rises are 9.7 st from ko:r̃ to naŋ-, 6.7 st through ulp, 6.6 st through ŋa(n), and 11.7 st from ŋan to wu:n. Emic falls are the (minimal) 2.0 st from naŋ- to -kun, 4.7 st from naŋkun to ulp, the (maximal) 13.3 st from ulp to ŋan, 5.3 st from ŋa- to -n.

Loudness:

Minor peaks occur on 'ko:r̃, (naŋ)kun, ulp, but the nuclear climax is on wu:n. A low trough occurs between ko:r̃ and naŋ-.

Length:

Length tends to be normal except at stress points: the fricative velar in ko:r̃ [ɛ] is 1½ m. and vowel is 2½ m. In naŋkun n- is ½m. but -ŋ- shares length of 3m. with unreleased -k- of 4m. In the same stressed syllable, -u-n both are 3m. The rising ulp shows a delayed suspense of 3 m. before the nuclear phrase /ŋan wu:n/, both being of double length.

5.1.7.6 Conclusions from mechanical analysis

1. The vowels form peaks of phonetic syllables. But, however short the onset slope of a contoid, (as with most stops), that consonant does not usurp the nuclear function of the vowel. There are five vowels, either long or short, which contrast effectively with five-way distinction of quality.[1] Mechanical analysis confirms that their allophones may be conditioned phonologically by their environment.[2] Supra-segmental features often affect them in tempo, pitch or loudness (as in 5.1.7.4).

2. Consonant phonemes fall into classes according to manner and point of articulation, voicing or aspiration. The voiceless stops show a brief period of silence, but the voiced ones retain their 'fundamental' frequency. Fricatives, being voiced, do not show the sudden trough of suspense, for their release is continuous, not punctiliar. Transitional vocoids leave their trace and are measurable, between contoids or word-finally, for emphasis.[3] Vocoids generally undergo change in quality relative to articulation, but contoids vary less.

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[1] See sections 5.1.4.2 and 5.1.4.3.

[2] e.g. whether nasalised, devoiced, centralised and so on.

[3] See section 5.1.7.3, speech sample number 57.

The present investigation confirms that some consonants may function as vowels in the nuclear slot of syllables.[1] This is perhaps because of resonance and voicing to be found more in some contoids than others: e.g. [r̃].[2] Likewise, voiced stops, fricatives and unaspirated stops show their fundamental more clearly, but voiceless allophones, being in suspense while unreleased, are left unrecorded. Voiceless stops show a tendency to be longer. Unaspirated, intervocalically, they appear 'geminate', but their phonetic length is non-significant.

3. Ta:yoɾ̃ voiceless stops are aspirated, sometimes ponderously, at word borders. So distinct is this that word-final silent vowels were suspected.[4] No such phones are given phonemic representation in this analysis. They are recognisably different from transitional vowels, which vary in quality according to the point of articulation of contiguous segments.

Semivowels cohere in closer fusion with their nuclear vocoid than do most other consonants. Their respective duration is thus more difficult to measure, where the boundary is indistinct. Hence the alternative term, 'glide'.[5]

4. Length, proved phonemic in this language, occurs regularly as a suprasegmental element which is exploited fully, often redundantly, for signalling emphasis, mood, emotion or focus. Although one 'mora' symbolises an emic and measurable norm

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[1] See section 5.1.5.3.

[2] Which shows up clearly because its tongue-flaps oscillate through 1-2 mora of the intensity 'slopes' in the film.

[3] Special investigation should substantiate this.

[4] In some words, e.g. ['nunt^{h}U] 'you (sg)', extra aspiration may be the vestigial remains of final vowels still current in neighbouring dialects of the Paman sub-group.

[5] Though the word connotes coda, rather than onset of syllables.

of duration, a slight difference occurs from vowel to vowel, and consonant to consonant, which is quite unnoticed by the native speaker who hears short and long vowels with ease.

Even extra length in a particular vowel is not lexical, but a part of the semantic attenuation applied in a specific utterance by the mood of the speaker. During such extra length, pitch may redundantly rise. But emic pitch changes do frequently occur during very long phones.[1] Such length is not confined to vowels, but is common in (unreleased) stops and nasals. Intervocalically, pseudo-gemination depicts length as non-contrastive, not lexical.

Long vowels and consonants sometimes greatly exceed the 2 mora of the 'doubled' short vocoid. Such segments are usually $2\frac{1}{2}$-3 mora in duration, and still longer for emphasis.[2] In compounds, where the same consonant ends the first and begins the second morpheme, the non-release of the first causes virtual lengthening of the fused segments. But, owing to the practice of eliding initial consonants in Ta:yoɾ̃, this is little different from the case cited above. When the two consonants have a (very) different point of articulation, then both are released and a shva-like vocoid occurs as a buffer between them: e.g. ['wu:n^{ə}nan] /'wu:n-nan/ 'going to lie down'. But the duration of initial /p t t k/ is hard to measure because it is basically a duration of stopping, or silence.

5. Different informants use different pitch ranges. In the same utterance, or, from mood to mood, in the same speaker, pitch is relative, not absolute. Some utterances show extreme ranges.[3] Three octaves may separate falsetto tones from laryn-

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[1] Heightening of emotion increases the relative pitch-range by a greater number of semitones.

[2] One mora proved to be about .2" on the visio-screen.

[3] One of 400 hertz, seven of 300, three of 280 and ten of 275 Hz.

gealised.[1] The speech analyses record minor changes of pitch as seldom greater than two semitones, but emic changes in pitch are usually greater than two semitones.

Since voices tend to 'sag' in frequency, rather than to rise, any rise in pitch is more noticable than a corresponding fall. In the eleven samples (5.1.7.5), pitch-rises tend to be slightly greater than pitch-falls:

+ 5.8		- 9.7
+ 12.7		- 19.7
+ 8.2		- 4.6
+ 13.4		- 5.4
+ 7.0	(Table 40)	- 7.5
+ 11.7		- 8.4
+ 7.0		- 7.9
+ 5.8		- 5.8
+ 12.0		- 11.7
+ 83.6 semitones		- 80.8 semitones

Small pitch drops seem rather to be etic and unnoticed by the speaker; between 2 and 3 semitones appears to be the size of the emic pitch signal when the utterance is calm.

Pitch may be linked with duration so that either one of the other charges the peak with emotive significance. Utterances sometimes receive emphasis by rising to a final nuclear climax. This contrasts with non-emphatic statements which terminate with a level tone. Terminals may rise or fall; they may change quickly or gradually. Some do neither. The calmer (or more normal) the mood, the smoother the end of the utterance.

6. Phonological stress is used in every utterance to signal emphasis of one kind or another.[2] Semantic prominence

[1] Eleven samples included scarcely typify normal speech-flow.

[2] Strong or medium stress morpheme-initially, weak elsewhere.

may override lexical stress, as seen in the samples. The presence/absence of such signals is phonologically contrastive, marking emphatic from unemphatic speech. Where emphasis is required to interpret the feeling of the speaker, he uses length/stress/pitch to signal the nucleus of a P-phrase. All three do not necessarily concur at the one point. They are somewhat arbitrary, and independent of the lexical nature of the morphemes.

Juncture is frequently conspicious by its absence.[1] Edward River speakers prefer to telescope words into strings, replacing C_1 with the previous final consonant (unless final nasals assimilate to a stop at the same point of articulation.) Emphatic speech, unless transitional vowels make word borders more fluid, exploits the juncture 'phoneme'.[2] Vowel-initial morphemes, (though lexically rare), may sometimes occur after a morpheme-final vowel. If so, front and central vowels generate a transitional semivowel /-y-/ and back vowels /-w-/: e.g. in /ŋe:-y-r/ 'knew', /n̲a:-w-m̲/ 'saw'. The central vocoid /-a /, before a following /a-/, may become a fused border /-a-a-/ or /-a:-/, e.g. /Ya:r̃apa-ak/ ['yɑr̃ɑpɑ:k^h] 'to Yarrabah'.

7. Summarising, T̲a:yor̃ V-phonemes may be short/long, lexically doubled in morpheme-initial syllables only, where the stress is usually stronger. Phrase stress conditions a stronger accent, giving three levels of loudness, S/M/W̲. Pitch, in parallel to this, has three emic levels, medium/high/low, each extreme having its allo-level, very high and very low.[3] Sixteen consonants combine with the vowels to make a great variety of sequences whose syllables are subject to suprasegmental extenuation in the three dimensions mentioned. Voice quality then produces every shade of mood/intention, independent of the lexical form and nature of each lexeme.

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[1] Often at pauses, or between stressed words, with interjections.

[2] Glottal constriction at juncture may become a stop [ʔ] depending on force and mood. Conclusive terminals often share it.

[3] Two extreme allo-levels are falsetto and laryngealised.

5.1.8 Orthography

5.1.8.0 General principles

A few maxims serve as a guide to the final selection of the symbols which must find acceptance by those who will use the Thaayorr language in written form:

(i) Phonemic principles should balance with regional sociological requirements.[1]

(ii) The need for a practical orthography would be paramount if present speakers of the language are to be made literate in the tongue they already speak and understand.

(iii) An acceptable alphabet must stem from the phonemic script used in this thesis.[2]

(iv) A group of literate bilinguals, missionary and government representatives and the linguistic research workers, should form the committee to investigate any provisional draft for a specific language area.[3]

(v) Any revision produced requires to be circulated to interested parties, for tentative sanction.[4]

(vi) Digraphs and diacritical marks must be minimal if the alphabet is to prove acceptable to the common people.

(vii) All symbols should conform to the pattern of English, ultimately the language of all literate Australians.[5]

(viii) Novel phonetic features noticed by sympathetic outsiders should not (necessarily) be symbolised: e.g. fricative allophones are quite predictable to the native speaker.

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[1] K.L.Pike. Phonemics, 1947, p. 208,

[2] Assuming that phonemic analysis has correctly substantiated each phoneme before representing it by only one symbol.

[3] Subsequent assistance may be desired from these advisers for literacy, translation and printing purposes.

[4] i.e. Government, Educational, Bible Society and Missions.

[5] Only normal typewriter symbols should be considered, avoiding ambiguous letters like 'c' or restricted ones like 'x'.

5.1.8.1 The phonemes to be symbolised

Thaayorr, with 16 consonant and 10 vowel phonemes, requires 21 symbols having psychological correspondence to 'English' ones. Edward River has no literary tradition, since missionaries used no vernacular for evangelisation. Any desire for phonemic purism must be controlled by an objective count of 'minimal pairs' as the relative criterion to functional load.

This research suggests that an informant who is literate in English can learn to handle his own language better initially by using a phonemic script.[1] The high percentage of digraphs seems inevitable for Aboriginal dialects. Thus, literacy at Edward River requires a practical alphabet using symbols acceptable throughout Australia. Some need no change:

p, t, k, l, m, n, r, w and y.

A change is recommended for the following phonemes:

dental /t̪/	written	as	th
glottal stop [ʔ][2]	"	"	'
affricate [ty][3]	"	"	j
trilled vibrant /r̃/	"	"	rr
dental /n̪/	"	"	nh
lamino-palatal /ñ/[4]	"	"	ny
velar nasal /ŋ/	"	"	ng.

No change is required for the vowel phonemes:

short	a	e	i	o	u
long	aa	ee	ii	oo	uu.

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1 E.A.Nida. Learning a foreign language, 1957, pp. 132 f.

2 This phoneme is of negligible functional load, but expedient.

3 [ty] is written as j rather than c, which might be expected when the affricate is mostly voiceless. But c is ambiguous in English, and informants never mistakenly misread /j/.

4 No sequence of n + y across morph boundaries, conflicts with /ñ/.

Comparative chart of orthographic symbols

Two orthographies economically express the Ta:yoř sound system:

Phoneme	Written symbol
/p/	p[1]
/t̪/	th
/t/	t
/ty/ ~ /j/	j
/k/	k
/ˀ/ ~ /'/	'
/m/	m
/n̪/	nh
/n/	n
/ñ/	ny
/ŋ/	ng
/l/	l
/r̃/	rr
/r/	r
/w/	w
/y/	y
/a/	a
/a:/	aa
/e/	e
/e:/	ee
/i/	i
/i:/	ii
/o/	o
/o:/	oo
/u/	u
/u:/	uu

[1] The present thesis confirms Capell's choice of /p, t, k/ for (some) Cape York languages. See A.Capell. A new approach to Australian linguistics, 1962, 5. He thought the plosive had developed differently in the Wik and Koko groups, being not devoiced from /b, d, g/(elsewhere).

5.2 GRAMMATICAL OUTLINE

...oooOooo...

5.2.0 Terms and abbreviations

(Table 42)

The following abbreviations occur in the analysis:

aj adjective
- aj-num Numeral aj.

as aspect marker

av adverb
- -all - ative
- -ela - tive
- -loc - ative
- -man - ner

cl (lexical) clitic

cn conjunction

dm demonstrative

(dr) directional

em emphasis

ex exclamation, interjection

ng negative particle

(nm) numeral adjective

nn noun
- -acc - ompaniment
- -com - pound
- -erg - ative
- -ins - trumental
- -obj - ect
- -pla - ce name
- -sub - ject

pn pronoun
- -acc - ompaniment
- -dat - ive
- -obj - ect
- -pos - sessive
- -sub - ject

pp prepositional particle

ps possessive adjective

vb verb (stem)
- -cau - sative
- -con - tinuous
- -fut - ure
- -mpf - imperfect
- -mpr - imperative
- -pnc - punctiliar
- -pst - past (tense)
- -rec - iprocal
- -ref - lexive
- -sec - ret

Tagmemes

AC accompaniment

Cl clause

Cn conjunction

Dm demonstrative

Dr directional

Eq equational (phrase) unit

Ns instrumental

Lo locational

Mb embedded

Mn manner

Md modifier

O object

On onomatapoeia

P predicate (verb etc)

Ph phrase

Q qualifier

S subject

T time

5.2.1 S y n t a x

The following story is given as a brief sample of the structure of the language.[1] An informant, Vincent Coleman, told this story to a meeting of Edward River elders in November, 1967. The method of analysis displays the text, the part of speech of each word, the literal translation, the tagmeme identification, and finally, the free translation.

Text:	Ku:tip	int - (n)-ul	(l)-e,	ku:tip ;	
Part of speech:	nn	dm	pn	as	nn
Translation:	story	this	it	next	story
Tagmeme:		S		P	Eq /

Free translation: 'Now for this story'

ku:tip (...)	int (n) ul	ŋan	ŋete	ŋatn	yik - m .	
nn	dm	pn	cl	nn	ps	vb-mpr
story	this	it	(kin)	f-in-law	my	told
0			S			P /

'My father-in-law told this story'

Ŋay	ka:r-p	moŋom-nan.		Pam	tu:mp	mant	pul .
pn	ng + as	vb-fut		nn	aj	aj	pn
I	NOT	will-tell-lies		men	greyhead	small	they-2
S	Ng	P	/	S			Eq /

'I won't tell lies' 'They were two old men'

Pam	tu:mp	kutiř	int	pul,	ra:k	in'n-ŋun .
nn	aj	nm	dm	pn	nn	av-loc
men	greyhead	two	these	they-2	place	at-here
	Eq ph			S	Lo	/

'They were two old greyheads at this place'

---

[1] Selected from band 6 on tape XIII.

Text: ŋan mok-o-r ŋatn yik-m ;
P-of-sp: cl nn ps vb-mpf
Trans: (kin) aunt my said
Tagm: S P /
Free T: 'My auntie said'

ŋu:mpuɾ̃ ŋan mok-o-r (ŋ)atn yik-m ;
nn cl nn ps vb-mpf
old-lady (kin) aunt my told(-it)
S P
'My old auntie used to tell about it'

Ku:k int (n)ul (l)e ke tak -(a)ɾ̃ (ŋ)oŋkoɾ̃ !
nn dm pn as ex vb-mpr ng-mpr
words these now oh leave don't
O P /
'Now don't you neglect these words'

Ka:r-p moŋom-nan; ŋay ŋan mokor (ŋ)atn ŋe:-y-m .
ng vb-fut pn cl nn ps vb-mpf
not-want will-lie I (kin) aunt my heard
Ng P / S O P /
'I don't want to tell lies: I obeyed my auntie'

Pam tu:mp mant(a), pul-nun ŋan ŋete-ɾ̃ (ŋ)atn-nan ŋe:-ym -y.
nn aj aj pn-obj cl nn-acc ps-acc vb-mpf pn
man greyhead small them-2 (kin) f-in-law with-my heard I
O P S /
'I listened to them two, the little old man with fa-in-law'

Kirk-a-t wak-ɾ̃-nat pul i:- kan in'n (p)-ul ;
nn-ins-em vb-rec-pst pn av-loc dm pn
with-spear fought they-2 up-there these two
Ns P S... Lo ...(S) /
'These two fought with spears up there'

Text: Kirk-a wak-r̃ i: pul:
P-of-sp: nn-ins vb-rec av pn
Trans: with spears fought there they-two
Tagm: Ns P Lo S /
Free T: 'They two fought together there with spears'

peln ku:l-in; Karyupkar (t)e:rŋ-(n)un;
pn nn av vb-mpr pn
they big-crowd quickly strike him
S Eq / Mn P O /
'The others were many; quickly hit 'im !'

Yul , pam yi:r̃ yik - m
vb nn aj vb-mpf
dodge man another said
P / S P /
"'Dodge,' another man said."

Yaŋkar-rot-kak karyupkar te:rŋ(n)un; yupyup-ar̃ oŋkor̃ ;
nn av vb-mpr pn vb-mpr ng
bow-legs quickly hit him waste time don't
O... Mn P ...O / P Ng /
'Hurry up and hit bow-legs: don't waste time!'

Pu:ŋ kana yan, nun karyupkar te:rŋ !
nn as vb pn av vb-mpr
sun has gone him quickly hit
S P / O Mn P
'The sun has set, quickly strike him (dead)!'

Nul pam ŋe:ŋk-ku:l yik - m yaŋkar-rot-kak wa:r̃ ;
pn nn aj vb-mpf nn aj
he man angry said bow-legs bad
S P O (Mb)
'The angry man said, Bow-legs is finished now!'

Text: Wa:ř, yaŋkar-rot-kak wun-m (n)ul
P-of-sp: aj nn vb-mpf pn
Trans: finished Bow-legs lay he
Tagm: Mn S... P ...S /
Free T: 'Bow-legs was lying down, done for!'

Punt yaŋkar-rot-kak: punt koyle yaŋkar-rot-kak-t
nn aj nn av aj - em
arm bent arm other-side bent-indeed
S Eq / S Lo Eq /
'his arm was bent, and the opposite arm was bent too!'

In'n (n)ul kumn-punt yaŋkar-rot-kak. Wak-ř-r pul (n)aŋunp:
dm pn nn aj vb-rec pn av
this he limbs bent fought two there
S Eq / P S Lo /
'This man's limbs were bent: they-two fought together there'

Peln i: ku:l-in-t ; ku:l-in wak-ř-r peln ;
pn av nn-loc nn-loc vb-rec pn
they there in a crowd in crowd fought they
S Lo Eq / Lo P S /
'They were there in a big crowd; they fought in a crowd'

Kirk-a wak-ř-nam (pel)n ra:k namp-t I:-kan .
nn-ins vb-rec-mpf pn nn nn-em nn-pla
with-sprs were-fghtg they place name-it "Up-there"
Ns P S Lo (S Eq) /
'With spears, they were fighting at a place called Up-there'

Waj-nam (ŋ)ay ka:r-p - le ŋaŋař yo:ř-p yi:ŋk - m
vb-mpf pn ng -em - as as av-em vb-mpf-sec
was-dying I not-want-next still now said
P / S P T / P
'(He) was dying; I don't want still now, was saying ...'

Ra:k kirk-a wak-ř-nam(pel)n I:kan-tř, ra:k ŋañj(ŋ)ak wun;
nn nn-ins vb-rec-mpf pn nn-pla nn aj vb-mpr
place wth-sprs fought they at Ikan place holy let it be
Lo.. Ns P S ...Lo / S Eq P /
'They fought with spears at the place Ikan, let it be holy'

Text: ŋul peln int muřkam-pu:n-r peln int Malriyu-t-u-n
P-of-sp: cn pn dm vb-pst pn dm nn-loc
Trans: and they these broke-taboo they these at Malriyu
Tagm: cn S... P ...S Lo /
Free T: 'And these men broke a taboo there, at Malriyu it was'

Ra:k muřkam-pu:n-r (p)eln, pa:nt-u, pam-al - nř.
nn vb-pst pn nn-erg nn-erg as
place broke-taboo they women men just
0 P S (S) (S) /
'At that place, they broke a taboo, women and men did just that'

Min wa:ř, ŋañj tařn wu:n min mopŋun .
nn aj aj av vb cl nn
bird evil sacred very abode bird wild-goose
S... P ...S (Eq)
'The wild goose, an evil and very sacred bird, lived there'

Kana ke'eř (n)un kirkuñj-ař (n)un ;
as vb-pnc pn vb-pnc pn
did speared him spear-jabbed him
P 0 / P 0
'They did spear him; did keep on jabbing him"

Pam nunt tono kirkuñj-ař; kar int ŋamp rirp-in-iř (n)un ,
nn pn nm vb-pnc pp dm nn vb-cau-pnc pn
man you one jabbed like this we pulled-out it
S P / Mn S P 0
'you were one man who jabbed him: like this, we pulled it out'

Int witrna int, (ŋ)amp witirma-t wa:n-r
dm nn dm pn dm-em vb
this holy ground we bora-ring call(it)
S Eq (S) / S O P /
'This is holy ground; we called it a bora-ground'

(Ku:k) ŋay (tak-iř oŋkoř !) ka:r-p moŋom-r, ŋan ŋete yik-m,
nn pn vb-mpr ng ng vb cl nn vb-mpf
story I neglect don't not-want to lie (kin) f-n-l said
O P / / S P
/ S Ng P /
'Don't neglect story (I'm not telling lies) fa-in-law said'

Pam tu:mp kutiř yik-m ; ŋay pař'r pork-p .
nn aj nm vb-mpf pn nn aj-as
men old two said I boy big !
S P / S Eq
'Two old men said. I was a big boy'

Nay pam in'n-ŋun pi:nt-iř ; pař'r mant-p ni:n-m (ŋa)y;
pn nn av-loc vb-pnc nn aj-em vb-mpf pn
I person at-here grew-up boy small stayed I
S Eq Lo P / Eq P S /
'I grew up in this place here; I was a small boy living here'

Text: Nanip (ŋ)atn-man yit-iř (ŋ)an .
P-of-sp: nn ps-erg vb-pnc pn
Trans: father my-did lead-rear me
Tagm: S P O
Free T: 'My father brought me up'

Ya:ř (yu:)-kuw mut wak-iř (n)un peln ;
vb av nn vb-pnc pn pn
went far-west ridge followed him they
P Lo / Lo P O S
'They went far west where they followed him on a sand-ridge'

Til(n)un kirkuñj-añ-p; ni:n-mañ kirkuñj-añ (n)un i: ,
av pn vb-pnc-em vb-con vb-pnc pn av
again him jabbed too sitting jabbed him there
Mn 0 P / 0... P ...0 Lo /
'Again (they) jabbed him there while seated, they did there'

Text: til ke'eñ (n)un (3 times); til (n)un kirkuñj-añ,
P-of-S: av vb pn av pn vb-pnc
Trans: again speared him again him jabbed
Tagm: Mn P 0 Mn 0 P
Free T: 'Again (they) speared him' 'again him (they) jabbed'

til kirkuñj-añ, til (n)un; ko:w rat-iñ (p)eln (n)un ;
av vb-pnc av pn nn vb-pnc pn pn
again jabbed-on again him nose chopped they him
Mn P / Mn 0 Lo P S (0)
'They jabbed on again; and again at him; they chopped his nose'

Laj-wan ! tak-natat - p - le ; mut te:rŋ-añ - (n)un, kok !
aj pn vb-pst -em-as nn vb-pnc pn ex
last one left (him) next back struck him kok !
Eq / P / Lo P 0 On
'It was the last blow! They left him there, hit his back, kok!'

Pak-un-iñ (n)un. Ra:k tak-r ulp Malriyu-t-an: ko:w te:rŋ-ar-un.
vb-cau-pnc pn nn vb dm nn-pla nn vb-pnc pn
buried him place left that at Malriyu nose hit him
P 0 / 0... P ...0 Lo / Lo P 0 /
'(They) buried him, left that place at Malriyu; they slashed nose'

Tak-añ (n)un naŋunp -nñ-p; pak-un-iñ okun (n)un; ko:ñ okun tak-añ.
vb pn av-av- em vb-cau-pnc as pn av as vb-pnc
left him there just buried maybe him outside maybe left
P 0 Lo / P as 0 / Lo as p
'They left him just there; maybe they buried him; perhaps they just left him lying outside'

Clause types represented in the above story

Transitive sentences, like all other types, have a free word order, but the preferred order is:

Object + (Subject) + Predicate + (Subject) 11

If the focus is on the subject, it may come first:

Subject + (Pred) + Object + (Pred) 4

Sometimes the verb may be emphasized and put first:

(Obj) ... Predicate + ...(object) + (subject) 11

In all of these, manner and location tend to come early in the clause. An object may be discontinuous or repeated.

Intransitive sentences, very free also in word-order, may begin with the subject or the predicate. Subjects may be discontinuous and occur next to their predicate. Subsidiary tagmemes (location, manner, time), tend to come at either extremity of the clause and not sentence-medially. Any tagmeme which is in focus, e.g. Instrument, tends to occur clause-initially.

Predicate + (Subj...) + Location+ (...S) 11

Subject + Predicate 10

Subject + (Location) + (Manner) 2

Equational clauses have a free word order, but the preferred order is: Subject + Equational + (Pred) 10

Occasionally, the equational element is last:

Subject + Predicate + Equational 2

Where there is no predicate, the Subject may be repeated:

(Subject. ..) + Equational + (Subj) 3

Secondary tagmemes of location may occur anywhere.

Eleven clauses have the object first, but 26 have their subject first. The predicate comes first mostly when it occurs with only one or two other tagmemes, or by itself. 26 transitive, 23 intransitive and 15 equational clauses occur.

In other (elicited) materials, the word-order has also been very free, yet the preferred order generally, is S + O + V. Where there is an adverb, it is usually inserted after the Subject: e.g. S + Mod + O + I.O + V[1]

Bound pronouns are frequently added (redundantly) to their verb in an abbreviated form. The reasons are probably, for emphasis, brevity, clarity and rhythm:

e.g. /rat̲-iř-eln-un̲/ 'chop-did-they-him'
Verb-stem + tense + subject + object.

Aspect markers often fill their slot to adjust the sentence rhythm and stress patterns: e.g. In the last two lines of the story, /okun/ 'maybe', being subsidiary, falls between two 'stronger' words, /pakuniř/ okun-un̲/ (following the verb); /ko:r̃ okun t̲ak-ař/ (preceding the verb). So too, for many other modifiers, whether aspect or adverbial. Focus often brings the emphasized word to the beginning of the sentence. A common tendency is to repeat a word or phrase in the same clause. This is redundancy rather than discontinuity.

---

[1] /Pam ka:l-mele n̲aŋn-man ŋerŋkan kuta t̲ok ŋat̲n t̲e:rŋ-ař yuk t̲oŋkn n̲aŋkn-man/ 'his uncle killed my cat with your stick yesterday'
S:N ± M:av + O:N + P:v ± Ins:N or S + M + O + P + Ins
N = noun phrase, consisting of cl:pam + nn:compound + qu:possessive pronoun
N_2= nn:kuta + qu: t̲ok + aj:ŋat̲n
N_3= cl:yuk + nn Head: t̲oŋkn + qu:poss-pn + Ns sffx

5.2.2 N o u n s

Ta:yoř nouns comprise the following non-formal classes:

(i) Names of natural 'objects' like /pormpor/ 'shack', /pa:t/ 'fire, /pu:n/ 'wind', occur freely as substantives connoting something perceptible by the five senses.

(ii) Names of persons and places: e.g. /Yi:yam/ 'Polly's fa-fa', /Koko Nomanik/ 'Tomi's son-in-law', /Wa:laŋ/ 'Christmas Creek', /Riř'ant/ 'South bank of Chapman', /Taŋknit Kuñjnan/ 'Place at the Melaman River', /Tupiyomolo/ 'Polly's bush-name'.[1] Most people use only their European name: e.g. /Mayk/ 'Mike', /E:ytna/ 'Edna', /Pita/ 'Peter', /Je:rli/ 'Shirley'. Many place-names sound archaic and doubtless they are very old, or characteristic of the pattern of another dialect. Different tribes have their version of the same names.[2]

(iii) Most nouns are divisible into lexical classes; each of these substantives requires its own pre-clitic marker. In this thesis, lexical markers are not joined or hyphenated, but merely preposed. Although phonologically one word, the lexical clitic + noun is not regarded as a compound noun, nor the clitic a bound morpheme. By interpretation of numerous examples, the present analysis is that the affiliation is not that of a genus noun + a specifier adjective, but that of a satellite lexical pre-clitic + a nuclear noun.

Preposed lexical classifiers for body-parts are: /ka:l/ 'ear', /ko:w/ 'nose', /kul/ 'waist', /kun/ 'posterior', /man/ 'chest, throat', /me:r/ 'eye', /miñj/ 'body', /mut/ 'back', /nunk/ 'phlegm', 'cough', /ŋe:ŋk/ 'abdomen, stomach', /pa:nt/ 'head', /pil/ 'hip', /punt/ 'arm', /ta:w/ 'mouth', /rant/ 'orifice', 'hole', /yu:r/ 'hand, fingers' and /tamur/ 'foot'.

---

[1] See appendices A and F for more names.

[2] These are not so much only a matter of cognate relationship, but of historic incident and tribal adventure.

The 'genus' of living creatures is broadly shown in the same way: /pam/ '(hu)man', /may/ 'vegetable food', /min/ 'hunted creature', /pa:nt/ 'woman, female', /ŋok/ 'fluid', /ru:r̃/ 'insect, small creature', /yak/ 'snake', /yuk/ 'tree'.

Environmental classifiers are few but common: /ŋaw-/ 'visible focus' (to demonstratives), /ra:k/ 'time, place, ground, area, thing' and /pu:ŋ/ 'sun'.[1] Miscellaneous lexical classifiers are common. When subdivision is possible, the clitic is used to cover the broad classification and the 'noun' is the specifier: e.g. /ku:l/ 'crowd', /tul/ 'woomera', /kun/ 'posterior'. Preclitics also distinguish clan kinship: /ŋan/, /punt/, /waṟ̃/, /pil/, /pam/ 'male', /pa:nt/ 'female'.[2]

(iv) The Thaayorr noun may undergo a considerable amount of inflexion. The subject of an intransitive sentence is not marked. But the agent of a (transitive) action bears an ergative suffix for which there are various allomorphs available: e.g. /-a-l/, |-V-l|, /-tr̃/, /-ntr̃/, /-n/, /-tn/, /-man/, |-V-n|, /-ku/, |-V| and |zero|. The function of these suffixes, often merely phonologically conditioned, will be illustrated in a later study.[3] They are summarised thus:

-V -(V)l -(n)-tr̃ -(t)(V) -n and -(m)(V)-n.[4]

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[1] See section 5.2.7. [2] See section 5.3.2.

[3] The subsequent grammatical description in depth.

[4] /-ku/ with /kuta-/ 'dog', /-V/ (a i o) with snake, fish, fly, crocodile, some verbs, qualifiers, interrogatives and adverbs. /-ntr̃/ following names, compounded and qualified heads. /-tr̃/ as focal marker to many agentive heads, some verbs, qualifiers and aspect marker /kana/ 'completive'. Kinship terms may also bear ergative suffixes.

(v) Instrumentals[1]

Affixes condensed are:-

-a(m)	(Table 43)
-e	
-om	-l
-u(n)	-(m) / -(t)] -an
-a / -(n)t]r̃	-(tam)-(a)-n

Notes:

-man	(poss.pn)	/kay naŋkn-man/ 'with my gun'
-tam-n	(dual pl. ps)	/pupuř-ak-man/ 'by cold weather'
-l	(on dm)	/tut-kay int-l/ 'with this gun'
-a-n	(on Q of nn)	/yu:r moŋ-an/ 'many times (hands)'
-ař	(nn ending -r)	/werŋ-ař/ 'with a boomerang'
		/tam-a-r̃/ 'with his foot'
-n	(added to nn |-C|)	/payp-n/ 'with (in) a pipe'
-t-n	(nn ending -n)	/ray-in-t-n/ 'with fish-line'
-tr̃	(nn)	/paddle-tr̃/ 'with a paddle'
		/man petn penpn-tr̃/ 'with flat belt'
-ntr̃	(nn)	/muřk-n-tr̃/ 'with (flint) stones'
		/otonje kun-toŋkn-tr̃/ 'with big stone'
-a	(nn; cf kat-n)	/kat-a/ 'with a stick'
		/yak-a/ 'by a snake'
	(on Q)	/tul pork-a/ 'with big woomera'
-e	(nn)	/woyŋot-e/ 'with a club'
-u	(nn)	/yuk-u/ 'with a stick'
		/yu:r-u/ 'with the hand'
-u-[2]	(nn ending -n)	/kum-u-n/ 'with the thigh'
-V-m	(nn)	/yak-a-m/ 'by (from) a snake'
		/top-o-m/ 'with gum'.

[1] These should be compared with suffixes in the ergative (iv).

[2] Some are infixes, the remainder, suffixes.

(vi) Vocative affixation affects kinship terms:[1]

e.g. /-n/ in /ŋan-i-n/ 'daddy'; /ka:l-i-n/ 'mum'
cf /mok-o-r/ 'auntie!' and /ŋan mokr/ 'aunt'.[2]

(vii) Elatives, allatives and locatives follow the pattern charted in section 5.2.5. Possession utilises two different suffixes, /-kak/ and /-jim/, the latter for some kinship possessors.

(viii) Objects are not marked for nouns, but they do tend to come towards the beginning of the clause.[3]

Phonotactics must manifest their constraint on allomorphs, for morphophonemes do not actually occur, except as a 'phantom descriptive device.'[3] Such expedients do facilitate analysis and comparison.

---

[1] See section 5.3.2.

[2] The referential term,

[3] The suffixes listed in this section are reserved for complete statement of alternation between phonemes in morphemes, in a later analysis which will list their mutual relationships.

5.2.3 Pronouns

Person morphs and pronoun stems fall into sets.[1]

A	/ŋay/ 'I'	/nunt/ 'thou'	/nul/ 'he, she, it'
B	/ŋa-/ 'I (sg)'	/ni-/ 'II (sg)'	/nu-/ 'III (sg)'
C	/ŋat-/ 'I (sg)'	/naŋk-/ 'II (sg)'	/naŋ-/ 'III (sg)'

In the first person, set A comprises:

/ŋal/ 'I and II dual (inc)'	/ŋamp/ 'I and II pl'
/ŋali(n)/ I dual'	/ŋañjn/ 'I pl'

Sets B and C comprise:

/ŋal/ 'I and II dual'	/ŋamp-l-/ 'I and II pl'
/ŋaln/ 'I dual'	/ŋañjn/ 'I pl'

In the second person, set A includes:

/nip/ 'II dual'	/nuř/ 'II pl'

Sets B and C comprise:

/nip-l-/ 'II dual'	/nuřn-/ 'II pl'

In the third person, set A includes:

/pul/ 'III dual'	/peln/ 'III pl'

Sets B and C comprise:

/puln-/ 'III dual'	/peln-/ 'III pl'

A strong awareness of case shows up in basic pronouns. The psychology of the Thaayorr speaker seems orientated rather similarly to English speakers in cardinal pronouns. The categories of the latinised approach are clearly subjective, objective, genitive, dative and ablative.[2]

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[1] The three sets are: Subjective, objective and possessive.

[2] In distinctive shapes of pronouns.

(Table 44)

The subjective pronouns are:

Number	Singular	Dual	Plural
I - II		ŋal	ŋamp
I	ŋay	ŋali	ŋañjn
II	nunt	nip	nuř
III	nul	pul	peln

The objective pronouns are:

I - II		ŋalin	ŋamp-lin
I	ŋan	ŋal-nan	ŋañj-nan
II	nin	nip-lin	nuř-nun
III	nun	pul-n$\overset{a}{u}$n	pel-nan

The possessive pronouns are:

I - II		ŋal-in	ŋamp-lin
I	ŋatn	ŋal-nan	ŋañj-nan
II	naŋkn	nip-lin	nuř-n$\overset{u}{a}$n
III	naŋn	pul-n$\overset{a}{u}$n	pel-nan

The dative pronouns are:

I - II		ŋal-u-ŋun	ŋamp-ul-ŋun
I	ŋat-un	ŋal-nu-ŋun	ŋañj(n)u-ŋun
II	naŋk-un	nip-ul-ŋun	nuř(n)u-ŋun
III	naŋ-un	pul(n)u-ŋun	pel(n)u-ŋun

Thaayorr speakers distinguish between single individuals and groups. In contrast to the thought expressed in /ŋal-at-un/ ~ /ŋal-(ŋ)at-un/ 'you-me with-me', the suffix /-r̃/ 'solitary', is often added to pronouns terminating in /-n/; /-r/ occurs elsewhere:

e.g. /ŋalin-r̃/ 'only we two (exc)' /ŋal-r/ 'only us'

Because of the backing influence of the retroflexed continuant, /r/, the transitional vowel gliding into it is always [ʊ]-like. Before the trilled vibrant, /r̃/, the transitional vowel initiating it is more alveolar and almost [ə]. Thus, the morpheme is |-Vr| ~ |-Vr̃| and written /-ur/ ~ /-ur̃/.

Final /-t/ may be suffixed to a particular pronoun for emphasis or focus. It is like the English definite article. With it, mostly, a transitional vocoid (varying according to the vowel in the previous syllable), can be heard. Front and central vowels condition a front vowel: back vowels condition a back [ʊ]. Where the point of articulation is similar, there is none. Thus, the morpheme is |-(V)t| and simply written as /-t/.[1]

Both of these morphemes may be combined on any one pronoun: e.g. /ŋay-ur-t/ 'it was only I'; /ŋañjn-ur̃-t/ 'it was us mob alone'; /pul-ur-t/ 'it was them-2 only'. The transitional vowel does not condition the alternative allomorph in /peln-ur̃-t/ 'it was them only'.

Dispossession is signalled with an 'ablative' suffix, /-ma(ntam-n)/, which is here written in full:

Number	Singular	Dual	Plural
I - II		ŋalntam	ŋampulntam
I	ŋatnma(ntam)	ŋalantam	ŋañjnantam
II	naŋknma(ntam)	nipulntam	nur̃nuntam
III	naŋnma(ntam)	pulnuntam[a]	pel(n)antam

[1] See section 5.2.5.

5.2.4 Adjectives

Adjectives follow their head; notional semantic categories are:[1]

Body-feeling, temperature:

ka:lkuřj 'cold	nuŋn 'dry'	ŋerŋ(i)r 'trembling'
pirkiřm 'naked'	punkurtař 'hungry'	ta:řn 'strong'
ŋe:ŋk-ku:l 'angry'	ŋa:j 'full'	pinar 'awake'

Number:

tono 'one'	kutiř 'two'	pinalam 'three'
maŋr 'few'	kapir punt 'several'	mo:ŋ 'very many'
pok-on 'none'	muntun 'too many'	ko:p 'all'

Quality, character:

kat 'rotten, dead'	kunpar 'crippled'	mantam 'bruised'
kunk 'living'	pu:kan 'new'	kejeř 'fresh'
ŋorŋur 'dirty'	kampir 'blunt'	terk 'lazy'
mo:ř 'quiet, placid'	yayar 'slack, loose'	yawun 'sharp'

Colour:

ku:mp 'yellow (deep)'	mewer 'green'	mi:rn 'red'
mu:l 'white'	ŋotn 'black'	riřkr 'white, clean'

Size, shape:

kokonum 'circular'	kon 'short, round'	mantam 'small'
ŋamal 'large'	pork 'big'	munj(u)n 'heavy'
roŋkř 'light-weight'	penpan 'flat, wide'	ritř stout'

Kinship, age:

kanam 'elder'	kuñaŋkar 'elder'	mayam 'teenage'
me:nmř 'younger'	pam 'male'	pa:nt 'female'

Ethical:

ku:ru 'delinquent'	ŋa:ñj 'forbidden'	min 'good'
wa:ř 'bad'	me:r-kun-wa:ř 'sad-faced'	wa:l 'mad, silly'.

[1] These are interim non-formal categories.

5.2.5 Dimensional suffixes

Directional and locational suffixes are the approximate equivalent of English prepositions. These morphs manifest a symmetrical emic pattern allowing great elasticity of expression. An attempted classification is: [1]

(Table 45)

	(Basic morph)	|V + C|	Purpose	Association	Dissociatn
-	-	-(V)	- a	- a k	- a m [3]
'at' locat.	- t	-(V)t	- t a	- t a k	- n t a m
'to' allat.	- n	-(V)n	- n a	- n a k	- n a m [4]
'from' elative	- m	-(V)m	- m a [5]	- m a k [5]	- m a m

Factors considered pertinent to this matrix in final checking of the accuracy of the arrangement are:

Possession/dispossession, nearness/remoteness, time, motion to/from/at, space near/middle/far, causation, animate/-inanimate, accompaniment, case, part of speech, solitary/together, human/non-human, dependent/independent, kinship, transitive/intransitive and purpose.

---

[1] This matrix is subject to confirmation after further analysis.

[2] The possibility of another column exists: -r̃, -tr̃, -nr̃ and -mr̃.

[3] With the gerund.

[4] Not yet well substantiated.

[5] With (possessive) pronouns.

5.2.6 Verbs

The Thaayorr verb has many variant suffixes for tense/aspect/mood, but there is no change for number/gender. This study substantiates the different conceptual categories of (five) realis and (five) irrealis, posited by Capell: [1]

> "Classical languages distinguish formally, indicative ... imperative ... subjunctive ... optative... . These moods are by no means universal ... . it is convenient to distinguish Realis and Irrealis. ... as aspects rather than as moods... ." [2]

Five categories may be marked with /-(n)ij-/ 'go and ...' between stem and suffix, that is in first order. The remaining five may have /-na-/ in the same slot.[3] This is a reduplicative device. The following suffixes have been observed:

(Table 46)

Verb suffixes with /-(n)ij-/ 'go and ...'

Optative * Potential	Imminent * 'nearly'	Past 'remote'	Causative 'make-im'	Non-specific
- n (a) (n)	-r̃t-a-(t) (-lat)	- V r̃ (-r)	-V / -na] n(-r) (n)	(-r) - ∅
-na-n-ji-n[4] (n)	-(n)ij-r̃t-a-t (n)	(-n)-ij-ar̃ (n)	-(n)ij-an(-r) (n)	-(n)ij(-r) (n) [5]

[1] A.Capell. Beginning linguistics, 1966, 145.

[2] The five Irrealis in two charts are marked with an asterisk.

[3] Evidence is still deficient for two; see table 47.

[4] Metathesis because of the assimilation of the /n/ to /j/.

[5] Conjugation I uses the uppermost suffix of each box; conjugation II uses the same, but is deponent in some: conjugation III uses the lower suffix in each box (with dental /n/); but conjugation IV uses the same with an alveolar /n/.

(Table 47) Verb suffixes with /-na-/[1]

'near past'	'---ing' imperfect	'Command' * imperative	'better' * obligative	'going to' * intention
-nat n	-m -nam n	-naɾ̃ n	|-mVɾ̃|	-nan(-r) n
-natat[2] n (nanat)[2]	-na-nam n (n)	-na-naɾ̃ n	-na-maɾ̃ n	(-na-nan)[2] n

Comments:

(i) All verb-stems have been divided into four classes, the biggest conjugation containing those with the most common set of suffixes:[3] e.g. /mu:ŋk-/ 'eat, drink'. This class comprises 290 stems of Conjugation I.

(ii) Class II contains all stems which are irregular or deponent: e.g. /kal/ 'take, carry'; /yan/ 'go, move'. This class comprises 17 stems of Conjugation II.

(iii) Class III consists of those with their peculiar set of suffixes, characterised by the common initial phone, dental /n/: e.g. /ko:pe/ 'wait'. This class comprises 27 stems of Conjugation III.[4]

(iv) Class IV consists of those with the same set of suffixes as III, but characterised by their common initial phone, alveolar /n/: e.g. /towol/ 'play'.[5] This class comprises 27 stems of Conjugation IV.

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1 A reduplicative suffix of the first order.

2 The bracketed forms have not yet been identified.

3 Regarded as the norm.

4 Some stems are not yet clear as to their membership in one or the other of conjugations III and IV.

5 The five verb-stems listed as examples are the typical models of each of their respective conjugations.

(v) It may be necessary to divide Class II into those stems which are deponent, e.g. /kal/ 'take' and those which are just irregular: e.g. /ya:n/ 'go, move'.[1]

(vi) A sub-class of 58 indeclinable verb auxiliaries occurs. These pre-clitics usually express some similar concept to the verb and have an affiliation which both modifies the meaning and redundantly supports it.[2]

A total of 361 verb-stems and 58 auxiliaries, has been extracted from processed materials.[3] Many English verbs are borrowed freely by Edward River speakers. The 'catalyst' /rirk(-r)/ 'do, perform, make', authenticates each loan word by suffixation to make a compound. The object may be suffixed:

e.g. /me:ñjn-m rirk-r/ 'mentioned it did'
/ŋay nin lern-rirk/ 'I you teach'.[4]

The suffix /-mat/ occurs with some adjectives. It implies deterioration, paralysis, stoppage, and forms an indeclinable verb, e.g. /waɽ-mat/ 'went bad'; /ta:ɽn-mat/ 'went hard'.

Reflexives:

The reflexive particle is /-e-/. This normally follows the verb stem in first order. Before a vowel or consonant functioning as a syllabic nucleus, it generates a transitional semi-vowel /-y-/: e.g. /te:rŋ-e(y)-r/ 'hit himself'.

Causatives:

The causative particle is /-(n)an-/. This suffix normally follows the verb stem in first order: e.g. /te:rk-an--(-r)/ 'make to go back'; /towol-nan(-r)/ 'make him play',

---

[1] In which case, they would be called (a) Deponent (b) Irregular.
[2] Mostly of the shape |CVC| ,
[3] To be described in depth in a later study.
[4] A causative element is sometimes present with 'loan + rirk'.

Reciprocals:

The reciprocal particle is /-ř-/. This morph is suffixed in the first order to the verb-stem except in causatives:

e.g. /wak-ř-nan/ 'going to fight each other'

/towol-nan-ř-nam/ 'were making them play together'.

Tense, aspect and mood in verbs:

(Table 48)

The 19 additional signals are summarised thus:

Verb auxiliary	M e a n i n g	Tense/aspect/mood
kana	'has, have, had, ready, do it, go on'	Punctiliar, perfective
kana-nt	'try to perform and achieve'	Attempted perfective
kanpa	'first, before, previously'	Priority
ka:r	'not, negative, interrogative denial marker'	Negation
ka:r-p	'not still, don't want to too'	Refusal, disinclination
kiři(-tiři)	'all right, go on, come on'	Encouragement, exhortation
cf. (te-)le(p)	(d i t t o)	
(ŋ)ant	'try, attempt, give it a go'	Endeavour
(ŋ)ak	'let (him...)'	Imperative
(ŋ)ak-na	'like to try'	Desiderative imperative [1]
(ŋ)aŋař	'still, yet'	Persistence, continuance
(ŋ)oŋkoř	'don't, you mustn't'	Prohibition, negative imper.
(ŋ)oŋkoř-p	'don't still, stop it!'	Continued prohibition
ŋulyiř	'nearly, almost'	Imminence
okun	'maybe, might, perhaps'	Possibility, uncertainty
-p(a)	'same again, same still'	Persistence, emphasis
(te-)le(p)	'go on, next one, ok, you now'	Exhortation, succession
yup	'soon, by and by'	Intention, delay
(kana-)-nuř	'just (now) did it'	Finished, recency.

[1] The suffix /-na/ possibly connotes potential or purpose.

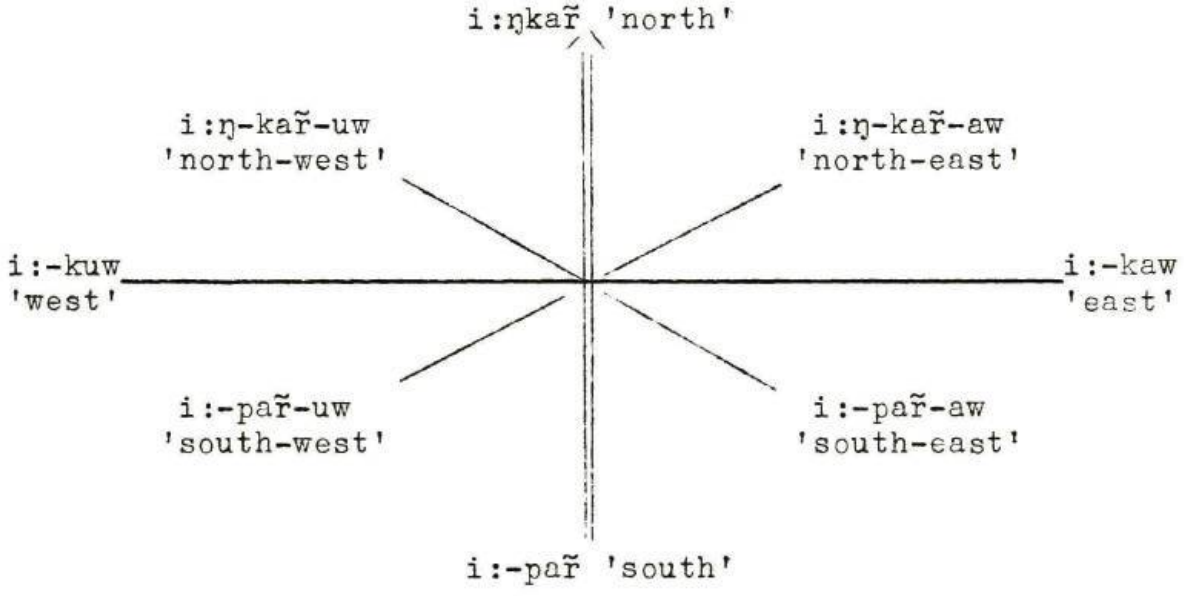
5.2.7 Adverbs and Dimensionals

5.2.7.1 The principal dimensionals

(a) Cardinal points of the compass:

Eight main compass directions are accepted by the Edward River culture. These divisions are thoroughly understood. Together with recurring partials, they form directionals which accurately give bearing, distance and directions of the traveller, whether coming, going or stationary. Recurring morphemes also describe the various aspects of the bank of a river, indicating ones relation to the sides or banks of the same.

From the following matrix, it can be seen that the NORTH-SOUTH axis is the dominant one, and that east-west is indicated by suffixes which may be added to the basic north and south roots. When standing alone, east and west bear the root-initial morpheme /k-/ which is their mark of compass direction.



(Table 49)

Subsidiary directions of the compass

Halfway between the four principal or primary points of the compass are the compound directional names, south-east etc. The Edward River concept includes one more dimension here than the European. It is the local river. Thus, the three secondary morphemes, /-aw/ 'east', /-op/ 'down-river' and /-uw/ 'west', may be suffixed to any directional or locality ending in /-kaɾ̃/ 'north' and /-paɾ̃/ 'south.

(Table 50)

	-aw 'east'	-op 'down-river'	-uw 'west'
-kaɾ̃- 'north'	+	+	+
-paɾ̃- 'south'	+	+	+

Referring to the charted matrix of compass and river dimensionals, it will be seen that many new words may be generated:[1]

/i:ŋ-kaɾ̃-aw/ 'there in the north-east'
/i:-ti-paɾ̃-op/ 'there on the south side at river'
/pal-i-paɾ̃-uw/ 'coming from there in south-west'
/yu:-ɾ̃-uŋ-kaɾ̃-aw/ 'going far away to north-east'
/i:l-i-paɾ̃-op/ 'come from there in south by river'
/yu:-ŋ-kaɾ̃-uw/ 'far away in the north-west'.

All told, 19 of those words may receive the above three suffixes, adding 57 additional words to the ones already able to be generated from the Compass and River chart. Identification of strangers often employs compass terms rather than tribal or place-names, because of close association of the clans with certain areas or base-camps:

e.g. /pam i:-paɾ̃-op/ 'man there southward at river'.[2]

[1] See next page, [2] Chapman, a mile south of Edward Community.

(b) Compass and river dimensionals

This array comprises locationals, directionals-from and directionals-towards. The subdivision, near/far, was found in both, but 'coming-from-south, coming-from-north, sides' of a river, are lacking.[1] Similarly, 'going-to-a-river-bank' has not been found, perhaps because it may be indicated using other morpheme strings. The combined matrix of N/S direction and N/S river banks is:

(Table 51)

			Compass		River	
			North	South	North bank	South bank
			-kař	-pař	-kan	-pan
'At'	'near'	i:- i:ŋ-	+	+	+	+
	'far'	yu:- yu:ŋ-	+	'waste time'	+	+
	'near side'	i:-ti- i:-tiŋ-	+	+	+	+
	'far side'	yu:-ti- yu:-tiŋ-	+	+	+	+
'Come from'	'near'	pal-i- pal-uŋ-	+	+	+	+
	'far'	il-i- il-uŋ-	+	+	+	+
	'side'	pal-ti- pal-tuŋ-	+	+	ø	ø
'Go to'	'near'	i:-ř-i- i:-ř-uŋ-	+	+	+	+
	'far'	yu:-ř-i- yu:-ř-uŋ-	+	+	+	+
	'walk to'	ya:-ř-i- ya:-ř-uŋ-	+	+	ø	ø

[1] The concept is expressed in derivatives of 'river-bank' |Can|.

The verb of movement, /yan/ 'go-come', is used in frequent combination with the words of the compass/river matrix. It will be noted that the front vowel /i/ occurs before the bilabial /p/, and that the back vowel /u/+velar nasal /ŋ/, [uŋ], precede the velar stop /k/.[1] In /yu:-ṯi-ŋ-/ 'at the far side of', the /i/ is kept before the velar nasal + stop, perhaps under the influence of the preceding back vowel /u/.[2]

A sentence containing /pal-ṯi-pař ṉi:n/ '(come) from the south side-stay' is used of those on walkabout from that direction, just as /pal-ṯuŋ-kař/ refers to the north side.[3]

/Ya:ř-uŋ-kař/ and /ya:ř-i-pař/ are an example of using the verb of movement /yan/ 'go-come' in conjunction with the directional particles, and corresponds to the separate /yan/ above, but in contrast with /ya:ř/ 'walk, go'.

An assortment of expressions can be produced such as /pam pal-uŋ-kař/ 'man come from the north', /pam pal-i-pař/ 'man come from the south', or /ra:k i:-pař/ 'place in the south there'.

The expected /yu:-pař/ '(far away in the south)' has gained an apparently idiomatic connotation 'wasting time', and is not used for reference to that direction at all.

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[1] Though speakers of mixed dialect often get mixed and keep the /i/ before the /ŋk/.

[2] Vowel harmony and also allophonic alternation are prominent in this vernacular.

[3] The allophone [ṯ] occurs after a vowel, [t] after a consonant.

Directional prefixes

From the above matrix, it is clear that certain prefixes having specific meanings as recurring morphs occur in the word-initial position. Four of these may also stand alone as words:

i:	'there'
yu:(w)	'far, absent'
pal	'come, (at,) near'
ya:ř	'went, walked'.

Others which may be regarded as bound morphemes occurring word-initially are:

i:ŋ-	'there'
yu:ŋ-	'afar, distant'
il-	'come from (there)'
i:ř-	'go to there'
yu:-ř-	'go far to distance'.

Colloquial expressions occur in reference to aliens. A man who belongs to the south side and comes for a visit may be called /pam ti-pař-m/ 'man from the south side'.[1] His place of residence is likewise /ra:k ti:-pař-m/ 'place-south-side-from'. /I:-ti-pař/ has been used as the term referring to such a distant place as Normanton, though children might omit the /-ti-/.[2] Adding the eastern component /i:-ti-pař-aw/ translates as 'far south-east (at Cairns)'. The river morpheme, /i:-ti-pař-op/ connotes the Chapman River, perhaps inland a short distance. All directionals may be used as adverbs in conjunction with other adverbs, as:

/Il-i-pař ŋular te:rk/ 'quickly come back from the S.'.

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[1] Table 45 on p. 228.

[2] According to one informant.

(c) Dimensional directives and locationals

Five main roots have been isolated to connote dimension, and they are linked with /-pal/(~ [ɓal] ~ [wal]) :

/kaw/	'east'
/kuw/	'west'
/kan/	'top'
/kop/	'bottom'
/koř/	'beyond, behind'.

These five are prefixed by particles which indicate Locality-at, (far/near), Direction-from, or Direction-towards (far/near). It appears that some or all may be used as verbs, as in /ŋay ka:r-p ra:k i:ř-kuw-iř/ 'I didn't want to go westwards', where the suffix /-iř/ indicates the past punctiliar tense. They are often used as adjectives, as in /pam i:-kan Mitchell-ak/ 'man up-there at Mitchell (River)'.

For comparative purposes, the morpheme /-$^{w}_{p}$al/ is included separately: [1]

(Table 52)

			'high' -kan	'east' -kaw	'low' -kop	'beyond' -koř	'west' -kuw	'come' -$^{w}_{p}$al
'At'	'near'	i:-	+	+	+	+	+	+
	'far'	yu:-	+	+	+	+	+	+
'come from'	'near'	pal-	+	+	+	+	+	+
'go to'	'near'	i:ř-	+	+	+	+	+	ø
	'far'	yu:ř-	+	+	+	+	+	ø

The morpheme combination /ku:-wal/ 'come from the W.' has been identified. Elision of word-initial |Cs| is common, e.g. /ku:w(p)al/ or [ku:w-ɓal]. All the above words are used in adverb slots, and subject to different order for focus.

[1] All resultant lexemes are listed in 5.3.3.

(d) To, At and From; Near, Far and Side

Dimensional Prefixation

The semantic value of the word-initial (prefixed) morphemes, shows a degree of pattern from the phonological and the lexical point of view. By including a word-initial /y-/, which is heard in some speakers, a word structure occurs which is characterised by the shape |C-V:-(C)-(i)-| or |CV.CV-|. A matrix shows the various structures of the prefixes involved:

1. Table 53

'Stay at'	'near'	(y)-	i:-		
		(y)-	i:-	t-	i-
	'far'	y-	u:-		
		y-	u:-	t-	i-
'Come from'	'near'	p-	a-	l-	i-
	'far'	(y)-	i:-	l-	i-
	'far'	k-	a-	l	*
'Go to'	'near'	(y)-	i:-	r̃-	i-
	'walk'	y-	a:-	r̃-	i-
	'far'	y-	u:-	r̃-	i-

* This word occurs rarely and has been used as in English, before its noun in a relator-axis order, as in this sentence:

/Jimi Kendal kal Cairns-mam pal in'nuŋun te:rk-r pul pam ta:w
Pant-an/
'Jim Kendall came back from Cairns to here, he and his friend,
Pantha'.

Certain derivatives may be obtained:

/i:/	'there'	/i:-r̃-a/	'(go) away'
/ya:r̃/	'walk'	/ya:-r̃-a/	'(walk) away'
/yu:w/	'absent, away'	/yu:-r̃-a/	'(go) far off'.

The latter word is used for 'home' by informants in Brisbane:

e.g. /Nay yu:r̃a t̲e:rk-n̲an/ 'I'm going to return home'.

When direction-from is confined to the East/West axis, a special form is available to this secondary dimension of the compass.

(Table 54)

				|-Vn|	
				-un	-an	
'come from'	'near'	pal-	-aw-	+	+[1]	'east'
		pal-	-uw-	-	+	'west'
	'far'	i:l-	-aw-	+	-	'east'
		i:l-	-uw-	-	+	'west'

[1] The obvious dissimilation of the vowels above is supplemented by one extra form, that of /palawan/ 'from the east', used by many speakers. This latter term refers to any place just near the Mission area.

(e) Dimensionals, directives and demonstratives

Most adverbs indicate locality, direction-to and direction-from as listed:

(Table 55)

'At'	'here'	i'i
	'there'	i:
	'afar'	yu:w
'To'	'here'	i'i - r̃ - a
	'there'	i: - r̃ - a
	'afar'	yu: - r̃ - a
'From'	'here'	i'i - wal
	'there'	i: - wal
	'afar'	yu: - wal

Another set of adverbs indicates a threefold concept of space relationship:

/naka/ 'here' /naŋunp/ 'there' /maŋar/ 'distant'.

Demonstratives also comprise a similar set:

/(ŋ)in'(n)/ 'this' /(ŋ)it/ 'that' /(ŋ)ulp/ 'that'.

Directionals derived from /in'n/ are:

/in'n-aka/ 'at here' /in'n^{e}man/ 'from here' /in'n^{u}ŋun/ 'to here'.

An Ergative suffix /-l/ signals transitive action:

/in'n-l/ 'this...' /it-l/ 'that...' /ulp-l/ 'that...'

The verb of motion /yan/ 'move, travel' may occur in:

/ya:r̃-a yan/ 'move away' /pal yan/ 'move come'.

Demonstratives

These may occur in their short form which is vowel-initial, or their emphatic form, using /ŋaw-/ as a prefix. It is frequently shortened to /ŋ-/. However, the word-initial /ŋ-/ may occur with some speakers after a word-final vowel in the preceding word. It appears to be dialectal rather than allomorphic. The word-final /-t/ is a suffix often added to demonstratives.[1] Those listed here may be used with an adverbial reference on many occasions, e.g. '(that) there'.

(Table 56)

i:	ŋi:	ŋaw-i:	'there (that there)'
i'i	ŋi'i	ŋaw-i'i	'this (here)'
in'	ŋin'	ŋaw-in'	'this'
in'n	ŋin'n	ŋaw-in'n	'this one'
in'n-aka	ŋin'n-aka	ŋaw-in'n-aka	'this one here'
in'nemen	ŋin'nemen	ŋaw-in'nemen	'from this here'
in'n-u-l	ŋin'n-u-l	ŋaw-in'n-u-l	'this one' (Erg-Instr)
in'n^{u}ŋun	ŋin'n-ŋun	ŋaw-in'nuŋun	'to this one here'
int	ŋint	ŋaw-int	'this (one)' Cf. /in'/.
i:-nun(p)	ŋi:-nun(p)	ŋaw-i:-nun(p)	'that one there (again)'
in'n-un-t	ŋin'nun-t	ŋaw-in'n-un-t	'it's this one (obj.)'
it	ŋit	ŋaw-it	'that (one)'
ulp	ŋulp	ŋaw-ulp	'that one (there)'
ulup	ŋulup	ŋaw-ulup	'(to) that one there'
ulp-t	ŋulp-t	ŋaw-ulp-t	'that's the one (there)'
ulup-t	ŋulup-t	ŋaw-ulup-t	'that's the one (there)'
i'i-r̃-a	ŋi'iř̃a	(ŋaw-i'i-r̃-a)	'go to that one there'[2]

[1] It is a focus marker, an article, drawing attention to the person or thing qualified.

[2] Confirmation for some of the above is still required, to clarify meaning, though the one bracketed has yet to be identified in field data. Note the following in which a directional suffix is added to a demonstrative already directional:

e.g. /in'n-e-m^{e}ăn-mam/ 'from this here-from'.

5.2.7.2 Subsidiary points

(a) Affixation

Certain medial morphs are used in linking the various directional affixes. They are now studied from the point of view of their combinatory possibilities.

(i) Distance combined with coming and going:

	∅	-r̃ 'go'	-l 'come'
i:- 'there'	+	+	+
yu:- 'afar'	+(w)	+	(^{w}pa-)+

(ii) Distance combined with medial forms:

(Table 57)

	-ŋ-	-ti-	-tiŋ-
i:- 'there'	+	+	+
yu:- 'afar'	+	+	+

In the above, /-ŋ-/ appears before the compass-morpheme /-k-/; likewise with /-tiŋ-/ 'side' as an allo-morph of /-ti-/. Similarly, /-i:ŋ-/ is an allomorph of /-i:-/ 'there'.

(iii) Directional prefixes combined with bound medial forms:

				-i-	-iŋ-	-u-	-uŋ-
'come from'	'near'	pa-	l-	+	-	-	+
	'far'	i:-	l-	+	+	+	+
'go to'	'near'	i:-	r̃-	+	+	-	+
	'far'	yu:-	r̃-	+	-	-	+

(b) Lexical expressions relating to tides

Tides have not been fully investigated. But an attempt is made to see the pattern of the Edward River concept as it emerges from the few terms already gathered. Words in brackets have not yet been positively identified, but are suggested as possible phrases to be confirmed later.[1]

(Table 58)

H I G H	L O W
Ŋok ta:w-kan (miñj) 'water high' (very)	(Ŋok ta:w-kop (miñj)) 'water low' (very)
Ŋok kana yat 'Tide came in'	Ŋok yu:-kuw 'water far west' Ŋuñan yu:-kuw 'sea far west' ('Tide went out')
	Ŋok piŋ-iř (miñj) 'water muddy'
Ŋok ta:w munj(u)n 'water tide heavy'	(Ŋok ta:w roroŋkř) 'water tide light'
Ŋok ya:ř-a / ŋok i:wal yan 'water away went / water came'	Ŋok ya:ř-a te:rk 'water away returned'
(Ŋok min ŋamal) 'big high tide'	Ŋok wař mantam 'small low tide'
Ŋok in'nunt ku:mŋ (miñj) 'Water is (very) deep there'	Ŋok pot-pot 'dry land, tide out' Ŋok pot-e 'shallow, low water'
Ŋok ŋurnt-urnt-uř yan i:wal 'Tide by night coming in'	(Ŋok ŋurnt-urnt-uř yan i:ř-a) 'Water by night going out'
Ŋok ŋurnt-urnt-uř pal yan 'Tide came in at night'	'Ŋok ŋurnt-urnt-uř ya:řa yan) 'Tide went out at night'
Mi:ŋ ŋok ta:w-kan 'high tide by day'	Mi:ŋ ŋok yu:-kuw 'Daytime low-tide'
Ŋurnt-urnt-uř ŋok ta:w-kan 'High tide by night'	Ŋurnt-urnt-uř ŋok yu:-kuw-nuř-p 'Low tide by night'

[1] On the basis of phrases recorded.

(c) Expressions defining time

Time division into three notional scales has been listed thus: historic, daily and relative times. No formal categories are postulated. One word, /ra:k/, conveying the concept of 'time', is also translated 'ground, place'.

1. Historic time

kanaŋkař̃	'long ago'
wuř̃ mo:ŋ-tak	'many years ago'
kař̃-man int kanpa	'three years before'
kař̃-man kanpa	'year before last'
kař̃-man	'last year'
ra:k kař̃tum (kanpa)	'after the wet season (before)'
ra:k kař̃-tum	'after the wet'
wař̃-e:kam-a kanpa	'year before last'
wař̃-e:k-am-a	'last year'
wuř̃-yoř̃	'last year, next year(?)'
puŋ-u-k kanpa	'month, week, before last'
puŋ-uk	'last week, month, time'
ra:k ŋerŋka pinalam-ak	'before two nights ago or three'
ŋerŋkan kanpa	'day before yesterday'
ŋerŋkan	'yesterday'
ŋerŋkan ŋurnt-urnt-uř̃	'last night'
yo:ř̃	'today, now'
ra:k yi:ř̃	'another time'
ŋul	'later'
ŋul-ŋul	'later this afternoon'
melnk-elnk-ař̃	'tomorrow'
yu:-kuř̃-a	'next week, month, time'
melnk-ař̃	'tomorrow (shortened form)'

Comparison of the three lists will reveal the existence of certain root morphemes which are subjected to reduplication and affixation.

2. Continuum of daily time

Time division is confined almost entirely to comments on the sun's progress, visible or invisible:

ŋurnt-urnt-uř	'(during) the night time'
ŋurnt:ŋurnt-urnt-uř	'early sunrise, about 5 am'
ra:k toŋk-on	'nearing early dawn, all asleep'
ra:k man kana tan-nat	'before dawn, brightening, 5 am'
pu:ŋ kana terpr wunp-ař	'sun nearly going to rise fast'
pu:ŋ i:-kaw	'just before dawn: sun east there'
pu:ŋ paj-nan	'sun is going to rise'
ŋerŋk-erŋk-erŋk-an	'early morning, 6 am'
ra:k kana patp-r	'daylight has come'
ŋerŋk-erŋk-an	'morning'
pu:ŋ kana rirp-iř	'there's the sun now, risen'
pu:ŋ kana ma:t-ař	'sun up higher now, 8 am'
pu:ŋ toŋk-un	'sun halfway up, 10 am'
pu:ŋ i:ř-kaw-an	'mid-morning, 10 am to noon'
pu:ŋ putp(u)n	'noon, sun on top, lunchtime'
ra:k toŋkun werŋka(r)	'mid-day, day half, between'
pu:ŋ i:ř-kuw-an	'about 1 pm onwards'
pu:ŋ me:r termp-on	'early afternoon, till about 3 pm'
yup-yup	'later on, 3 pm onwards'
pu:ŋ i:ř-kuw	'about 3 to 4 pm'
miñjŋul	'afternoon'
ŋul	'later'
ŋul-ul	'late afternoon'
pu:ŋ kuntir(i)n	'about 5 pm'
ŋul-naŋun	'after that'
i:ř-kuw pu:ŋ mu:nt-nan	'sun's going to set in west'
pu:ŋ kana kun-a ni:n-r	'sun has set down low now'
pu:ŋ kana mu:nt-iř	'the sun has dipped down'
ra:k me:r ŋerŋkan	'getting dark now'
ra:k ko:ř miri	'dusk, sunset, red after sundown'
ra:k kana ŋerŋka tak-nan	'really dark now'
ku:k yik-man	'8 pm, going to pictures time'
ra:k toŋk-n werŋka(r)	'bed-time, start to sleep'
wut-ŋul-mun	'(near) midnight'.

3. Relative time

(i) Aspectual (and temporal)

kanpa(t - - le)	'before' (focus, emphasis)
kana-tr̃	'punctiliar marker, perfective'
kana-n(u)r̃	'just now (happened)'
ko:(w)-kanp(a)	'first, before'
koř-koř	'again and again, all the time'
koř-ŋk(u)n	'behind, after, late'
ŋul	'later (on)'
pu:ŋ-mař	'always, every time'
(ra:k puŋk) yup-up	'(home-place) all the time'
ra:k til	'next time'
ta:w-an	'until'
ta:w-taw-an	'always, repeatedly, every time'
tele	'next'
yo:r̃-p - n(u)r̃-p	'just now again, still'

(ii) Relative

koř-kanpa	'before'
ŋař-i'i	'still here, now here'
(yo:r̃)-nř	'just (now), only'
ra:k kař-t-m	'(from, after) the wet'
yo:r̃-p - n(u)r̃-p	'only just now today'
yo:r̃	'today, before, now'
wal-koř-e	'any more there?'
yi:r̃-am	'sometimes'
yup	'soon, by and by'
yup(p)al	'come later'
yup ŋatiř	'later still'
yup-ow	'later, eh?'

(iii) Durative

ko(:)r̃-koř	'kept on all the time, repeatedly'
ŋař oŋkoř	'not yet, don't still'
pu:ŋ-n(u)r̃ yat	'only the sun moved (all day)'
ŋorŋuřm(u)r	'all day long, still'
ritar	'for a little while, briefly'
tono-ŋko	'for one night, lastly, finally'
yup-up	'all day'
yu:r pinal-ma	'for three nights (days)'

(Note that some words occur in two lists for overlap and comparison)

(d) Lunar mensuration

As with daily time in which the terminology depends heavily on the behaviour of the sun, so does the lunar terminology derive almost entirely from comments on the size, shape and position of the moon. A continuum has been attempted in so far as limited elicitation allows.

kapir	'the moon'
kapir-n(u)ɽ̃	'only the moon(light), cloudless'
kapir pu:kam	'new moon, crescent'
kapir ko:w-kant-im	'smallest new moon'
kapir kana pi:nt-iɽ̃	'the moon has grown, waxed'
kapir kana penpan wen-r	'moon is waxing (bigger)'
kapir i:wal kana rirp-nat	'(big) moon has come out from there'
kapir me:r min	'bright moonlight' (moon-eye-good)
kapir (kana) ko:w-riŋ pataɽ̃	'full moon (has) bitten bushes'
kapir kana waɽ̃am-r	'the moon has waned, weakened'
kapir maɲ(i)r ŋamal	'moon is waning smaller'
kapir kana wonp-r	'the moon has waned, died'
yo:ɽ̃ kana mant wen-r	'the moon has become small now'
kapir penpan	'flat (big) moon; third quarter, big and white'

(Table 59)

5.2.8 Interrogation

The markers of interrogation appear below in their emic relationship. Together with intonation, each is complete.[1]

ŋan ?	'what?'
ŋan-a	'for what?'
ŋan-ŋan-r	'how much, how many?'
ŋene ?	'why?'
ŋene-m	'from what, what's wrong, matter?'
ŋene-n	'why, to why?'
ŋene-p	'why, what for still?'
ŋene-r̃	'with what, by what (Instr)?'
wan ?	'who, what, whom?'
wan-l	'who (ergative)?'
wan-l-ŋun	'to whom, whose?'
wan-t-an ?	'where?'
want-an-neman	'from where?'
wantan-ŋun	'to where?'
want-ant-ar̃	'How about it, what's the matter?'
wu:mp ?	'General question marker, is it?'
ka:r ?	'Negative implication, isn't it?'
Zero ?	'Statement in w hich the intonation rising on a focus word, can be interpreted as a question'
Okun	'Maybe, perhaps, dubitative adjunct asking confirmation'
Yun-un	'What-do-you-call-it?'

[1] See sections 5.1.7.3 and 5.1.7.4.

5.3 SPECIMEN L E X I C A L MATERIALS

5.4 SAMPLE STORY from the O R A L TRADITION

5.3 SPECIMEN L E X I C A L MATERIALS

5.3.1 Diglot linguistic comparison[1]

A sample of lexical data follows:[2]

English	Thaayorr	Kuuk Yak ('snake')
Body parts		
head	pa:nt	* (same word)[3]
hair (of head)	yaŋ(i)n	*
forehead	ko:w-rirk(i)r	(ulup) *
face	ko:w-mi:ŋ	*
eye	me:r	mel
nose	ko:w	*
ear	ka:l	*
throat	man (pu:kal)	man konkul
chin	terpr̃	talpuř
beard	terpr̃ pañjir	" panjř
mouth	ta:w	*
lip	ta:w(p)etn	*
tooth (not molar)	ki:n	*
tongue	man te:per	man ŋalkar
neck	man	*
nape	mut	*
armpit	ka:ɻ	gap
shoulder	meper/man pert	riŋk
windpipe	man pu:kal	man gonkul
upper arm	punt	*
elbow	punt	*
hand	yu:r	*

[1] Using the "Linguistic materials for fieldworkers in Australia" published by the Australian Institute of Aboriginal Studies.

[2] Illustrating the relationship of the Snake language to Ta:yoř.

[3] An asterisk indicates the same word again, allowing quick calculation of the percentage correlation with Thaayorr.

left hand	punt tak	*
right hand	" mal	*
palm of hand	yu:r tip	*
finger-nail	yu:r rirk(i)r	yu:r relkəl
rib	pampuř̃ pint	*
chest	man row	*
breasts	ta:tin	*
suc (breast) milk	" poŋkor	*
back (n)	mut pi:nt	* [bI:nt]
heart	man ŋe:ŋk	man ŋɛŋkəř̃
liver	tip	*
kidney	mut ri:tam	*
belly (exterior)	ŋe:ŋk	ŋɛrŋkəř̃
navel	ŋotur	ŋutul
viscera (guts)	kun ŋamal	*
urine	tiy	*
urinate	tiy kana rirpiř̃	tɛy kana moř̃ən
excrement	kun	*
excrete	kun-atř̃ kun	kun-tɛrp naŋkər
pubic hair	tir	*
penis	kuñj	(*)
testicles	rila	*
vagina	yin	*
clitoris	" ka:l	* [yIn gal]
buttocks	pil	*
thigh	kum(u)n oŋkun	kumən bup
knee	puŋk	*
lower leg	yaŋkar	yaŋkar pup
ankle	tamr-atir	tam latəl
foot	tam(u)r	taməl
sole (of foot)	" tip	" tipU
skin (human)	petn	*
skin swells up	puŋk (insect bite)	*
vein	tat	*
blood	kam	*

tendon	ṯaṯ	*
fat (n)	ritiř	rijəř
bone	pi:nt	*
a sore	wiyṯ	*
name	namp	[nɑmpU]
vomit(v)	(paṉ) po:rmp(u)r	*
" (n)	paṉ (nay wa:ř)	*

II Bodily functions, senses

see	na:w-r	nakən
blind in one eye	me:r-wa:l ṯono	mɛlwal ṯonʊ
blind in both eyes	wa:l-int-l	wal yintər
hear	ka:l-ŋe:y-r	kaluŋɛn
deaf	wa:l	*
eat	mu:ŋk	kiři jɛj
hungry	punkurtař	punkartəř
swallow (v)	mu:ŋk	
drink water	ŋok mu:ŋk	ŋɛk jɛjənaŋkər
thirsty	ŋok mantař	" manatəř
my dog died lastnight	kuta ŋaṯn wonp-r ŋurnt-urnt-uř	k. ŋ. wɛṅpen ŋ.
sick	miñjwañj-atř	m - - kərk
head-cold	pa:nt nunk-ak	pa:nt nunk-ərk
saliva	ṯa:w ṯe:rp-r	ṯaṯak
spit (v)	ṯa:w-ṯunp	" ṯunpur
sweat (n)	numuř	nɛnkən
" (v)	" wupuřint-r	" muřn
wipe sweat from baby's face	numuř woṯoṯ	" woṯoṯ
I am frightened	ŋay wenet minŋ-r	ŋay win minŋər
Are you frightened of the snake?	yak-am minŋ wu:mp	y. aŋəl minŋ yakam
cry (weep)	me:rt-pa-pař	row ṯaŋər bat
laugh	ṯaŋkar	ṯaŋkər

I speak Ta:yoř language	Ŋay ku:k Ta:yoře yik	Ŋay yik ku:k^{U} Tagiriř
He talks too fast	Nul ku:k petpetpun yik	Nul pɛřpɛř-pun yikyik
Talk to me	Kuk ŋatun yik	*
I w ill sing a song	Ŋay wu:j ŋak mi'iř	ŋ. w. ŋak mi'in
What did you say?	Nunt wantantař yik-r	Nunt wantantəř yikən
tell me	nunt ŋatun yik	wan ŋatun wan
smell (v.trans)	Ŋay kuŋun nu:nut-r	nututur
breathe	ko:w ŋe:ŋk	koŋɛrkəř
pant	ŋe:ŋk toŋk-l	ŋɛŋkəř toŋkun
cough	man nunk	nunk man nat kirk
he's calling out to you	Pal ya:ř nunt ko:we!	Pal ya:ř-nt ko:wɛ
scratch itchy skin	yinp petn	tavɛrku
black head (pimple)	mayil met-ař	mayil metən
squeeze a blackhead	tarint-r	tarintən
sore (painful)	miñjwañj	*
I am cold	Kuřja ŋay, půt-pa:t	pořjo, potapatən
I am hot (dry wind)	Pa:-pat ŋay	pa-pətəř
I am hot (warm humid)	Pa:patun wupuřint-r	papatəř nɛnkənanjər
woman gave birth to baby	pit-ař	pitən
woman has new baby	ta-pɛl	pařət-l gɛntəl
she washed baby	wotot-un	wo-tot
I washed myself	miñj mu:nt-nat-y	mɛnj-mu:nt-naŋkər
work (v)	mit rirk	mɛt taŋkənaŋkir

III Stance

sit	ni:n	ninaŋkər
stand up	tan	taŋkər
be standing (you all)	(nuř) tan	*
be lying down	wun	wunon
lie on ones side	penpuř	*
enter (fut.)	kana rok-nan	kana rok-naŋkir
walk, go	(i:řa) yan	iyař waŋkər
go away (return)	ya:ř-a yan, (te:rk)	puř^{U} tɛ:rk

run	ri:tj-r	puř yamp
swim	yuŋar	yuŋur
white man coming	waŋ i:wal yan	waŋ i:wal waŋkər watun]
come here	(ku:we) pal ya:ř	pal ya:ř (waŋkər)
come quickly	pal ya:ř petetn	pɛřpɛřpən yamp
climb (v)	taŋk	*
get up on stone	ta:ŋk-ar	*
child fell from tree	wont-r yuk-um	yukum tařkən
man emerged from cave	rantim rirp-iř	rantim mořn
return (intrans)	pal (t)e:rk	*
turn (change dirctn)	maŋk-wařk-ant	maŋk wařkənt
dance (v)	wu:j	*
jump (hop once)	ra:nj	*
playing	to-towol	woŋoŋ
remain at rest	wun	*
look for	wa:t	watən
sleep (v)	wut-wun, patp	wut-nuř-wunun

IV Physical transfer and holding

get me some water	ŋok pal mi'i	ŋɛk pal minnamp
take meat from bag	kunut	pal kuñan
give (away)	(ya:ña) re:k	puř re:k
put down	wunp	*
put in, insert	(wunp) rok-an	* wokɛ
throw a stone	muřka pirk-ař	m. pirkən
pull	(punt) kunut	pal gonyan
push	ta-tunp	*
bring(water)	pal kal	*
carry child on shldr	man pete kal	man pɛtɛ gal *
hold in hand	ŋan kalal yu:run	ŋan kəlal yurun
tie a person up	rope tuř kat-un	*
tie leaves on stick	kat-r yuk^{U} turmpan	*
join 2 strings	rok-an	rokɛn
they buried him	pak-un, pak-un	*
dog buried meat	pak-un	bakun *

V Impact, concussion

cheeky person	pam ta:wuřa	pam ta:wařu
spear (v) using woomera	tunp (tul-u)	*
" " " hand	yu:r-man tunp	*
hit with missile	pirk-ař	pərkən
" " stick (stone)	muřk-a pirk	muřk-a pirk namp
" " hand	yu:r-u te:rŋ	yu:ru terŋ namp
dead	(wonp-r) watp	wɛnpun
kill him dead	watp te:rŋ	wařp te:rŋ
step on	ma:k	makən
cut meat with knife	yak	*
stab with knife	pij-an	piřijan
cut off finger	yu:r-at (rat)	*
chop wood	pa:t rat	*
split the log	ŋapirko	pandaltəl kɛr
dig a hole	ra:k rant raw	raw namp
they 2 are fighting	pam kutiř wak-ř	kutiř wakaku
steal money	mani repon-iř	mani bakəřnən
" a woman	pa:nt repon-iř	pa:nt "
break (tr)	tik	*
" (intr)	rumpař-r	rumpařən
rub (ease pain)	nu:mp-un	*
abrase (rub dileteriously)	petn ŋap-r pirk-ař	katəl pirkən
saddle chafed horse's back	petn ŋap-r pirk-ař	" "

VI Human classification

fully initiated man	pam manu	pam moŋku
Aboriginal, black person	pam notn	*
woman	pa:nt	*
newborn baby	pař'r me:nmř pu:kam	pařtəl gɛntəl
dirty face	ko:w ŋotn	ko:w ŋolm
child (to puberty)	pař'r	pařirtəl
old man	pam tu:mp	*
old woman	ŋu:mpuř	*

elder brother	pam kanam, puŋk(p)ork	pam kuñaŋkar
elder sister	pa:nt kanam, ẏapa	pa:nt "
younger sibling	pam me:nmuř	pam pukuřn
	punt(m)e:nmuř	puntukuřən
father	ŋanip, ŋanin	* *
mother	kalin, ŋanam	* *
father's sister	pinař	*
mother's brother	ŋan ka:la	ŋan kal
mother's bro's son	kutun	minirəm
" " daughter	pa:nt pa:t-um	mařa
father's father	pumin,	*
" mother	pinař	*
mother's father	ŋetin	*
" mother	"	ŋan ŋet, kamun
son	ŋoton	*
daughter	ŋoton pa:nt nerŋk	*
(my) wife	pa:nt (ŋatn)	*
husband	marn	pam marunj
spouse		
wife's father	kaln	* (pam kalunj)
" mother	mayat	*
white man	waŋ	*
white woman	metit	*
policeman	yu:r-at-m	*

VII Values, mentation

good	min	*
bad	wa:ř	wařařu
know a person	wal-merem	wal-mɛlɛm
know a fact	"	"
I know about cars	"	"
unknowing	pam ŋo:ŋkom	
I'm cold	ŋay kuřja	porjo
hot and sultry	ra:k pa-pat-un	ra:k papətəř
new spear	kirk pu:kam	kalk terkəřm

old spear	kirk me:r-kanam	kalk mɛlɡankəm
cold weather	pupuř-ak-mun	*
he's telling lies	nul moŋom-r	nul ku:k^{U} wɛrkən
right, correct, proper (mit)	min	min takaŋkən
understand (English)	ka:lat-r	kalatən
thinking of him	ŋe:ŋem	ŋemem
dreamed about	pit	pit *
yes	ŋawoy	*
no	(ŋay) ka:r	*

VIII Material culture

spear (n)	kirk	kalk
butt of spear	kut	kalkutU
sharp point	me:r-yawun	mɛlyawun
blunt "	me:r-purŋ-m	mɛlbuŋu
bark (of spear)	kotamur	kalknat
boomerang	werŋir	wɛrŋəl
grooving	ŋapir ko'oř	pantatəl kɛr
adze (v)(boomerang)	ru:k	tap
spear thrower	tul	*
(shell) flint chip in handle of spear-thrower	tul-(r)erkɪ	tulaklәl
hook of spearthrower	tul-ko:w	*
shield	yuk putn	yuku buřən
" handle	yuk yinir	*
digging stick	katan	*
coolamin (piti)	tawat	kalmp
(fishing rod) spindle	pent	*
hair-string	workuř	wolkuř
fighting-stick	woyŋot	*
stone-axe	kurp	kulp
steel axe	kay	*
knife	nayp	*
sharp knife	nayp pam tawuřa	* n. p. tawuwařu
blunt knife	" kampir	nayp kuluwařu

red ochre	mirn	*
yellow ochre	pi:p kun-kolor	kun-kolor̃
anoint with ochre	pi:p werke	kar̃pun
I'll go hunting	ŋay yan ya:ña, min-a	ŋay puñu woŋkər " " mutaŋkən
hunt wallabies with fire	waña<u>t</u> mi<u>n</u> ko<u>t</u>on rint-nan	min pulpil
hunt kangaroos with dogs	mi<u>n</u> ko<u>t</u>on kutaku ke<u>nt</u>	mi<u>n</u> waña<u>t</u> wiknaŋər kutaku kentən min ŋulpil
winnow	yu:r-um pu:n pu:k	pupu pankan yu:rum
sew	wi:<u>t</u> mu:nt	wi:<u>t</u> <u>n</u>ant
sinew string	<u>t</u>a:<u>t</u>	yaki
European clothes	<u>t</u>ar̃at min	*
dry (clothes)	mimp <u>t</u>a:<u>t</u>in	*
European rope	rup	*

IX <u>Fire</u>

fire	pa:<u>t</u> (rint)	*
cold ashes	" ruj	pa:<u>t</u> <u>n</u>ul (tum nul)
hot ashes	" me:r-ak	" mɛlərk
smoke	<u>t</u>o:mp	<u>t</u>okəl
flame	pa:<u>t</u> <u>t</u>e:pir	*
light the fire	pa:<u>t</u> rint-ij	pa:<u>t</u> wik na:mp
blow fire (mouth)	pa:<u>t</u> pa:<u>t</u>-an	<u>t</u>a:w pa:<u>t</u>an
fire is burning	(waña<u>t</u>) <u>t</u>a<u>t</u>at-r	waña<u>t</u> <u>t</u>a<u>t</u>at-r *
extinguish the fire	ke:mpe(-<u>n</u>ar̃)	kɛmpɛn
hot coals	pa:<u>t</u> me:pr	pa:<u>t</u> me:l
fat will melt	poŋkor	*
fire-saw		
firestick	puɸuñ	*
burn the grass	waña<u>t</u> rint	waña<u>t</u> wik

X <u>Water</u>

water	ŋok	ŋɛk
rain	kormun	yinp
it is raining	" <u>t</u>a<u>t</u>ar̃	" kana <u>t</u>ar̃-nat

wet person (rain)	tipir	*
dew	tip(u)r	*
rock-hole	rant-i	*
soak (n)	ŋok meñj	ŋɛk mint, meñj
claypan	pi:p	*
cloud (generic)	ka:paj	ka:pařj
thunder-head	pulŋuř	*
rainbow	tintin pa:nt	tokorn yikan
water flows along	ŋok yan	ŋɛk waŋkər
(ground inversion) fog	tipur	tatokəl
hail (n)	(tipur)	*
ice	ka:lkuřj	kal bořjən
water will freeze	ŋok ta:řn	ŋɛk tařən

XI Topography

sea	ŋuñan	*
river	wa'ap	watap
creek	yal	*
mountain	(ŋ)ot(oŋ)añji	otanj
cliff	me:r-yawun	mɛlyawun
cave	rant ŋamal	*
dark(cave)	ŋotn (nənk)	ŋolm taŋkən
stone, gravel	muřk	*
gap	ra:k man rant	*
earth, ground	ra:k	*
path	ku:lam	wa:tən
winding(path)	rankankən	ranka:(n)kən
(mythological) road	ku:lam tulum	kulam tulum *
European-type road	ku:lam waŋ-a	*
sand	nan	*
dust	ra:k yoñj(pak-un-ir)	*
dry (sand)	pot-pot	poto:t
heat mirage	yawuruŋkuř	*
white sand	kañjit	kanjiř

red sand	ra:k kam-kam-u	kama:mu
wet sand	tipir kañjit	kanjit mɛdəl
sandhill	ra:k mut	*
level ground	ra:k penpan	ra:k riřkan
smooth surface (rock)	piřpř wa:l	yipir
thicket, bush	tutj	*
salt	jolt	*

XII Sky and heavenly bodies

sky	ra:k kumun	*
sun	pu:ŋ	ŋařˇ
star	me:r-polk	yukuřjəl
milky way	ra:k kumun wa'ap	* * watap
Pleiades (7 sisters)	ŋamal mo:ŋ	y ukuřjəl
moon	kapir	*

XIII Time

night	ŋurnt-urnt-uř	*
red of dawn	ra:k kamupatr	kamupatan
daytime	mi:ŋ	*
stay two days	kutiř-ka patpr	kutuřk^{U}pařir
when?	ŋan (ra:k ŋan ?)	ŋan
when will you go?	ŋunt ŋan yan ?	ŋan waŋkir
now	yo:ř	*
soon	yup	*
by and by	yupyup	yupup
(died) long ago	ka:naŋkř (wonpr)	tili'i (wɛnpən)
tomorrow	melnk-elnk-ařˇ	rapantəřˇ
yesterday	ŋerŋkan	*
winter	pupuř-ak-man	*
summer	kilatirn	ra:k partəřˇn
morning	ŋerŋkerŋkan	*
today (I'm sick)	yo:ř (miñjwañj toŋkr)	yo:ř (m-w-) toŋkən
I stayed (for 2 yrs)	pa:njir	pa:njən (naŋkir) pa:njaŋkir

XIV Wind

wind	pu:n	po:p
wind is blowing	pu:n pu:k-iř	po:p° pankaner
whirlwind	ka:paj	ka:pařj

XV Directions

north	i:řuŋkař	iřuŋkuř
east (go east)	i:řa-kaw	i:řaw
south	iřipař	iřipəř
west	iř-kuw	iřuw
(movement) up	iř-kan	iřan
" down	kopon re:npen	iřop re:npen

XVI Dimensions

moderately far	tork(ŭ)ř	tolkuřəl
very, very far	maŋar	*
near (adv)	ta:piři	pupun
big	ŋamal	yampur
small	mant	bukuřn
long	torkoř	*
short	kon	run
fat (person)	ŋamal, pork	yampur
thin "	mentem	pukuřn
thick damper, loaf	munjun	*
thin " "	may mant	may pukuřn
wide (opening, cave)	tampuř	tařji
narrow " "	wut(u)ř	*
straight (road)	kunanp	kunanpuř
winding "	(ku:lam) rankankan	ku:lam ranka:kən
round	kopuŋk	*
heavy	munjun	*
light (weight)	rorŋkuř	*
full (bucket)	tatařn	*
" (stomach)	ŋa:j (ŋe:ŋk)	ŋařjař

XVII Animals

Is your dog dead?	kuta ṉaŋkn wonp-r	kuta wenpən ṉaŋkn
no, he's still alive	ka:r-p wonpur; kunk ŋa:tiř wu:n	key, kunkař kar wenpən
meat	kermper	kalnpar
rotten meat	tutpar	tuřpa
raw meat	kunk	kunkař
cooked meat	manti	*
tail	mul	*
(domesticated) dog	muta (waŋ-a)	*
dog barks	kutaku kokoj-r	kutaku kərjořjr
(dog) bit	patař	patən
dingo	ŋerknim	ŋəkəm
animal	min	*
snake	yak	*
snake bit my dog	kuta ŋatn yak-a pat-ař	k. ŋ. y. patən
red kangaroo	min pokoř	min ŋankam
pouch of kangaroo	yin por	*
euro	kin ku:j (wa:tar)	min ŋankam " wurmpuř
rock wallaby	min koton	min ŋulpil
emu	min nampi	min buřip
opossum	min kuln	*
" fur	panjir	*
rabbit bandicoot	min pink	*
native cat	kuta tok	*
European cat	" " waŋ-a	*
Is your cat a male?	kuta tok pam ?	*
spiny anteater	min kirkpik	min kalk piku
sheep, ram, horn		
horse	ya:řman	*
rabbit	min pinapin	*
bird (generic)	min mantmant	min mantandu
emu	min nampi	min buřip
" feathers	ru:nmur	*

emu egg	min nampi napun	puřip napun
" chick	wokur	" wokur
eagle hawk	min kutal	*
claw of eagle-hawk	tamur	tamel
crow (n)	min wa:t	min waru
white Major Mitchell cockatoo	min kermpul	*
black cockatoo	min ya:muř	*
galah	min nemp	*
egg of bird	napun	*
wing feather	mař	*
down (n)	mantam	pukuřn
wild turkey	min riŋkn	min batuŋk
fly (v) (bird)	yan, ri:tj-r	wa:ten, yampen
wing	punt	*
feather (not wing)	mař	*
fish	ŋat	*
printi		
bearded dragon (kadni)	min piñj	*
sleepy lizard	rirmpirmpin	*
bluetongued lizard	min takutu	min wal-pel
fly (n)	ŋo:nto	*
mosquito	woŋol	mɛ'ɛr
louse	kulpun	kak
moth	ru:ř mopŋun	ru:ř mopuŋgun
grass-hopper	" puŋk rätülk	" puŋk ratulk
centipede	ru:ř ŋompor	*
scorpion	tene	*
native bee	may rat	may bap
wild honey	" "	tařj
edible witchetty grub	may wumpu	*
grass	wařat	*
vegetable food	may	*
I'll cook it	rint-r	wik
dough is swelling up	pirmp-r	*
tree	yuk	*

wood	pa:t	*
rotten wood	" kat	*
that wood floats	yuŋuŋar	yuŋ-ŋoŋur
stick (not wood)	yuk turmpu	yuku tulmp
leaf	ri:ŋ	*
bark of tree	petn	*
root (non-water-bearing tree root)	yuk(k)umun	*
river gum (water eucalypt)	ko:mpen	*
coolibah	rerŋk	*
mulga (stunted scrub mulga)		
ghost white gum		
bloodwood (hard big red gum)	kentir	kentəl
supple-jack	naj	naɽəj
black-heart		
mangrove	til	*
beantree	woroŋk woroŋkɽ̃	wərəŋkorŋkəɽ̃
iron wood (harder than iron-bark)	kurkun	*
wild-plum	may ma:k	*
wild-orange	may nunan	*
wild fig	may kupaɽ̃ir	may kupaɽ̃əl
yam	waɲj	*
spinifex		
" seed, gum		
grass seed		
green grass	mewɛ̃ɽ̃	*
fruit (generic)	may	*
ripe fruit	may manti	*
unripe fruit	may kunk	ŋuñ
fruit seed	rat	*
flower	pa:tar	*

XIX Quantification

few	kanpir punt	kanpar punt
one	tono	*

two	kutiř	*
three	pinalam	wampař
four	moŋ yu:r kolele	yu:r kotel
five	yu:r moŋ	tawur
moderately many	kermper punt	kalnpa bunt
very many, vast multitude	wařmiñj	tawur
How many children?	pař'r ŋan-ŋan-r ?	pař'əl ŋanan
and (involved in four)		
I'm heaping up stones	wunp-unp	niti:t
I'm counting sheep	ŋay mij-ij-ař buluk	mijijən
nothing	pɔkon	*

XX Identification

I (intrans and trans)	ŋay	ŋay *
thou	nunt	*
he, she, it	nul	*
we two (inc)	ŋal	ŋalin
" " (exc)	ŋali	"
you two	nip	*
they two	pul	*
we pl (inc)	ŋamp	*
" " (exc)	ŋañjn	ŋaynjən
you (pl)	nuř	*
they	peln	*
this (close)	in'n(ul)	*
that (prox)	ulup (there)	*
that (distant)	ŋawit	*
that (understood)	ŋay wa:l-merem nunt in'n wun 'I know ..... you here live'	
		weleləm nunt in'n wunu:n
what?	ŋan	*
where (stat)	wantan	*
there "	i: , ulup	*
here "	ŋawi'i	*
who	wan	*

how	ŋene-r̃	*
other	(pam) yi:r̃	*
some went south	yi:r̃am r̃ipar̃ yat	yir̃ipər̃ yat
" " north	" i:r̃uŋkar̃ yat	ir̃uŋkur̃ yat
all went north	ko:p yat i:r̃uŋkar̃	kopər " "

XXI Camp

camp (n)	nakn	*
(humpy) wurley	tajam	ŋorŋkər
windbreak	rekel kewak	*
single men's camp	pil mayam-ak	pilyantimuk
" women's "	pa:nt mutwut karma	pa:nt mut putkur
ground smoothed for camp	ra:k nakn pu:k	nakən pankan
stand the post upright	kunkunanp rak	kunkunanpər̃ rak

XXII Colour

black	ŋotn	ŋolm
a white stone	muŕk riŕkir	*
red	kamkamu (mirn)	kamamu
green	kunk	kunkar̃
yellow	pi:p kunkolor	kungoloŕ
" (wattlebroom)	kamkamu	kamamu

XXIII Verbal suffixes

what are you doing?	nunt wantantar̃	nunt wantanter̃
I'm putting out the fire	pa:t ŋay rint-r	pa:t ŋay wik-r
'I've already put the fire out'	Pa:t ŋay rint-iŕ kanpa	ŋay wikən kanpa
we used to eat 'roos	Min ku:j kanpa mu:ŋk-m	Min ŋankam kanpa tejəm
Now we eat bullock	Puluk ŋul mu:ŋk-nat	Nul min buluk tejnat

'If you had come to my camp, I'd have given you some meat'
Nunt pal ya:ř, ŋay min kermper yup re:k-r
Nunt pal ya:ř, ŋay-in kalnpar yup re:k-r

I'll eat the meat Ŋay min kermper mu:ŋk-r
Ŋay rapantir tejin min kalnpar

I'll get water to put on (out) the fire
Ŋok ŋay mi'i-nan pa:tun rint-nan
Ŋek pa:tun wik-naŋkir

You did not put the fire out
Pa:tun ka:r wunp-ař nunt
Pa:tun ka:r nitən

Don't call-im name belong him
Ku:ku Yak:
Nunt pur aŋal kunk naŋkir - Puř aŋul ya:ř 'Don't go away!'

XXIV Noun suffixes

I have a good dog ŋay kuta min pi:t-r *

I have two good dogs " " " kutiř pi:t-r *

I went in my car Ŋay (Coen-ak) ri:tj-ař motokat ŋatn-man
" " -ɛk yampən " -kirk

We have no meat Min kermper ŋañjn pokon
Min kalnpar ŋaynjn pok-muř

He has no water Ŋok in'n pokon Ŋɛk pok-muř

His face is like a coconut
Ko:wmi:ŋ int kar coconut *

He has long teeth like a pig
Ki:n torkoř-kak Ki:n tolkoř-kirk

He runs (first) like a horse
(Kanpa) ri:tj-r kar yařman-kak
Kanpa yampun kar yařman-kirk

I'm shaking from cold Kuřja pot-pa:t-r Pořjo pa:t-r

because ulpu pa: *

why ŋene *

from fighting tak-an-r tawul-m takul-m taka nampun

because wantantař okun wantantř okun

a dog bit me kutaku pat-ař-an kutaku patn

Your big dog bit me kuta pork naŋknman patař-an * * patən

'I'll hit him with a stick! ŋay woyŋotɛ tɛrŋir
Ŋay nun te:rŋ-nan woyŋot-e

...for water ŋok ko'o-nak ŋɛk-kirk kumuk

I'm looking for my mother ŋanam ŋatn watat-r
ŋay ŋanam ŋatn wa:t-m

Come away from the fire Pañ'əl pal yamp pa:tum
Pañ'r ulup, pal ya:ñ pa:t-um

I'll go to the stone ŋay i:ña yan muřk-tak
ŋay yiyañ waŋkir muřk-tak

To Cairns Cairns-tak Cairns-inuk

I hit the snake with a stone ŋay yak muřka te:rŋn
ŋay yak muřk-a te:rŋ-añ

I'll go with you ŋay naŋk-un yan ŋay naŋkun waŋkər

The snake went under the stone rant-in rokun
rant-in rok-r

The snake is under the stone muřk-anak wunum
muřk-tak wun

because I ate... ulupu-pa *

getting up on the stone pañ'əl muřkan taŋkaŋkər
pañ'r muřk-an tataŋk-r

is on top of the stone pañ'əl puřpan muřkan nɛnɛn
pañ'r putpun ninin muřkan

The woman is standing next to the snake
pa:nt in'nul yak-an tan-an ta:piři
Pa:nt in'nul naku tena:n

put the axe next to the tree Aks yukun tayoŋkenun
kay yuk-un tayoŋkenan

I'll swim in the creek
ŋay miñjmu:nt-r yal-an *

That man lives in a cave Pam it-l muřk rantin wunun
pam it-l teřp-un rant-in wun

I'll camp at the creek ...ra:k me:r-puŋk-un Watap mɛlbuŋkun
(patp-ñan)

He's old, but he's still alive
Pam tu:mp kunk ŋa:tiř yan
p* t* kunkañ wa:tən

Supplementary

The dog bit my hand Kuta-ku yu:r pat-ař k. yul patən

You fell from a tree on to me

Nunt pal pirpřij ŋat-un wont-r

Nunt pal ŋatun tařkn

I cooked meat for you

Ŋay naŋkn kermper rint-r

ŋ. n. min kalnpar wikn

I was looking for you Ŋay nin wa:t-m *

The horse is not going Yařman ka:r-p yan y. puř ka:rp waŋkər

Make him go Ya:řa wak puř wak

You are not laughing Nunt ka:rp taŋkar n. aŋəl taŋk-r (ka:rp)

I'll make you laugh Ŋay nin tataŋkar re:k-r *

I ate meat yesterday Ŋay ŋərŋkan min kermper mu:ŋk-ař

Ŋay min kalmpař tərjəm

I'm eating meat now Ŋay yo:ř min kermper mu:ŋk-r Ŋ. y. term m.k.

I'll eat meat tomorrow Ŋay meln-kař tele mu:ŋk-r

Ŋay nin kalmpař rapantř term

I saw a dog Ŋay kuta me:ren-iř Ŋay kuta mɛlɛn

The dog saw me Kuta (-ku) ŋan na:w-r kuta-ku ŋan nakən

We saw each other Ŋañjn turma na:t-ř *

I'll paint myself Ŋay mu:l-i werke Rapantř ŋ. mu:li werkən

We 2'll paint each himself Ŋali mu:l-i werke

Rapantəř ŋali mu:li werkən

We 2 will paint each other

Ŋali mu:l-i we-werk-ř

Ŋal rapantəř mu:li werkən

5.3.2 Kinship terminology

Capell reiterates the great variation from one society to another in reckoning blood relationships.[1] This interests the linguist because of the terms he elicited as language data from his informants. English speakers distinguish brothers from sisters, but pay less attention to their age range.[2] They also resort to vague terms like grandma, grandchild and cousin, oblivious, for example of one of the indigenous features which the anthropologist calls the 'equivalence of brothers'.

The following lexical items are a part of the Ta:yoɾ̃ kinship system. The lexical classifiers are included in alphabetical order, usually with the referential, not the vocative form. The full range of kin is not included for each term.

	ka:la(-r)	'uncle'
ŋan	ka:la	'mother's brother, uncle'
puṉt	ka:la	'husband to brother'
	ka:l-i-n	'mother!'
pam	ka:l-mele	'father-in-law, uncle'
	kal-n	'uncle! Fa-in-law!'
	kam	'blood'
	kam-n	'Grannie!' (mo-mo)
	kam-u-n	'Grandma (mo-mo)!'
	kana-m	'first, elder, older'
pam	kanam	'elder brother to younger brother'
pa:ṉt	kanam	'elder sister to younger'
ŋan	kamṯil	'mo-mo, Grandmother' (Talking of grandson: e.g. Polly's mother, Elizabeth, to Peter, her son.)
ŋan	keme	'Grandma, child to mother's mother' (e.g. Peter to Elizabeth; also Polly about her mother's mother, Mary Moses.)

---

[1] Which really belongs to the study of anthropology. See: A.Capell. Beginning linguistics, 1966, 155.

[2] No real terms exist for younger/older brothers or sisters.

ŋan koyitnit 'son (Peter) to father's (Tomi's) father'[1]
cf. ŋan pu:mi 'younger brothers...'
ŋan keme-ñantam 'From either parent's mother'
(cf. ŋan ŋeteñantam 'from parent's father')
pam kuñaŋkar (naŋn) '(his) younger, last-born male sibling'
pam " puŋk-(p)ork(-u)'first big bro, elder brother'
pa:nt kuñaŋkar (naŋn) '(his) younger last-born female sibling, small sister'
pař'r kuñaŋkar (naŋn) '(his) youngest sibling' (male)
pa:nt kuñaŋkar puŋk-(p)ork(-u) 'first big sister, elder sister'
pam ku:tun (=munt) 'mother's bro-son', cousin, (nephew)'
pam ma:nu '(initiated ?) youth, young man, big boy'
ŋan ma:ra (ŋatn) '(my) son-in-law's mother'
'you're my husband!' /wife')
punt ma:ra(-r) 'husband (to wife)' (Clem's aunt to Clem's
ma:rn 'husband'
pil mayam 'young man, teenager, youth, lad, lass'
wař mayat(-ak) '(to) wife's mother, mo-in-law (to male)'
ŋay yuk mele 'I'm the owner, it belongs to me!'
pam me:nmř 'youngest brother' (Aidan to Charlie)
pa:nt me:nmř 'youngest, smallest female, sister'
pam me:nmř kuñaŋkar 'younger brothers'
pa:nt me:nmř kuñaŋkar 'youngest sisters'
me:r 'eye, kin'
pam me:r-mele 'wife to brother-in-law'
pam me:r-mele ŋatn 'my husband, owner, also bro-in-law'
pa:nt me:r-mele 'wife to husband's sister, sister-in-law'
met-t 'white woman'
mokor 'Auntie!' (biggest mother)
ŋan mokr 'aunty, biggest mother' (Polly to Mavis and Myrtle Foot), 'niece'
ŋan muka 'nephew, niece (Myrtle to Charlie, Aidan)
ŋay nin muka 'I'm your nephew, niece, sister's child'

---

[1] Cf. koyitiř 'son (to fa-fa); Polly to fa-fa, Yi:yam.

Pam munt = ku:tun 'full cousin, mo-bro-son' /pam munt ŋañj/
'poison cousin, can't talk together'
Pam naŋn mokr '(her) aunty, daughter to mother's sister'
pam naŋanam 'mother'
pam naŋanam katam 'step-mother' (biggest mother)
pam naŋanip 'father'
pam naŋanip katam 'step-father' (biggest father ??)
(ŋan ~ naŋ- 'kin, relation')
pam nentiten-tam '(from) Grandam,(fa-mo), grandchild'
pam nerŋk 'son'
pa:nt nerŋk 'daughter'
ŋan ~ naŋ- 'kin, relation'
ŋanam 'mother'
ŋanam-(ŋ)atn punt-(m)e:nmr̃ 'my step-mother'
ŋanama(y)-jim-ak 'To the old Dad' (To eldest bro, uncle, big father)
ŋanin 'Dad!' (vocative)
ŋanip 'father'
ŋanip-i 'with Daddy'
ŋanip-i-n 'father (+ operative suffix)'
ŋan ŋete (ŋawi'i-nul) '(He this) my grandson here' (says the mother's father to daughter's son)
waṟ ŋete 'father-in-law, husband to wife's father'
ŋan ŋete ŋi: '(my) father-in-law there!' (Boy to mo-fa)
pam ŋan ŋete-ñ-jin ŋaw-i'i kal (nunt) 'You take it for Grandad' (Mother, Polly to Peter, her son, referring to her father, Bill Henry)
waṟ ŋete-ṟ-pa 'with wife's father, there again indeed, with Grandad'
ŋet-i-n 'Hey, Grandad!' (Grandson to mo-fa)
pam naŋn ŋetiñam(-antam) 'from Grandpa (possessed agent)'
ŋan ŋetiñam(-an-tam) 'from mother's father, from Grandpa'
ŋan ŋeteñantam 'from mother's father, from Grandad'
ŋoton 'son!' 'daughter!' (-in-law)

ŋoton ŋatn, pal kal 'My child, bring it here!'
ŋumpuř 'Old lady, female pensionner'
pam 'person, man, male'
ŋoton pam nerŋk 'son'
pa:nt wife, woman, female, girl'
ŋoton pa:nt nerŋk 'daughter'
pa:nt kuñaŋkar puŋk-(p)ork(u) 'first big sister' /ter'
pa:nt-u-n kuñaŋkar (ŋatn) '(my) younger, biggest sis-
pař'r 'child, boy'
pař'r me:nmř pu:kam 'new-born baby-boy'
pina-r 'aunty!'
ŋan pinił 'wife's mo-in-law, also niece to fa-sis'
pina-ř 'aunty, father's sister (ergative)'
pa:nt pinar 'daughter-in-law'
pil 'hip-joint, kin'
pam pil-mayam 'young man, teenage boy'
pa:nt pil-mayam 'young lady, teenage girl'
pam pil-wete [1] 'son-in-law' (Lawrence to Mayk, Simeon, Matthew) 'Son's wife's mother'
ŋan pu:mi = ŋan koyitnit 'small bro, younger brothers'
cf. ŋan koyitiř (Peter to Tomi's father, /pam tu:mp/)
pu:min 'young brothers!'
punt 'arm, kin, relation, cousin (biggest ?)
pam punt-(m)e:nmř 'younger sibling' (male)
pa:nt punt-(m)e:nmř 'younger sister'
pař'r punt-(m)e:nmř 'younger sibling,(either sex sometimes)'
pa:nt punt-iřp 'woman who has just had a child'
pa:nt pa:t-u-m (ŋatn) 'my wife' (mo-bro-dghtr), sister-in-law' (my woman from-the-fire)
pa:nt kuñaŋkar puŋk-(p)ork(-u) 'first big sister'
punt rorko 'wife, sister-in-law' (says bro-in-law) (Uncle take for cousin)

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[1] Note also, /pa:nt pil-wete/ 'mother-in-law'.

pam tu:mp 'old grey-head (man)'

ŋan tuwa 'nephew'

pam rotom 'son-in-law (says father)'

punt tuwa 'nephew'

punt tuwa-ñ-jin "belonging to nephew'

tuw-u-n 'nephew!'

ŋan wa:na 'brother'

wa:nin 'Hey, brother (younger or older)'

punt wa:na "biggest brother'

waŋ 'devil, ghost, white-man'

(pam) waŋat '(witch) doctor (man)'

pil wete 'father-in-law, wife (of husband's father)

ŋan wila 'small sister'

Nay nun wil-n 'I'm your small sister' (Polly to Ruby)

punt wila-r 'with a small sister'

wu:j-iñ-ja (ya:ña kal) 'Take him (baby) away to Daddy'
(wife talking to husband of Grandad)

ŋan yapa (ŋatn) '(my) elder sister'

ŋan yap-añ-jin mut wunpr rat 'Send a letter for big sister'

Nay nun yap-(u)-n (Vocative) 'I'm your big elder sister'
(Ruby to Polly Brian)

yuk 'tree, stick, branch, tobacco, relation'

Specimen sentences using kinship terms

Pam-a-l mel-e-n pa:nt te:rŋ-ař
'The owner-husband hit (his) wife'

Pař'r pa:nt-u pař'r kuñaŋkar naŋn te:rŋ-ař
'The girl hit her younger brother'

Pinař ŋan e: ŋoton e: 'Aunty, what you want (your) son for eh?'

Punt rorko it yan 'That's (my) wife going along'

Punt ma:ra ŋit (ŋi'i)
'That's (This is) my husband'

Ŋanam ŋatn punt -(m)e:nm-a-ř
'Hey, my step-mother!'

Ji:jaj, ŋan wa:na 'Jesus (is) my brother'

Nunt ŋene-p yat wa:nin
'You shouldn't have gone, brother'

Ŋanip-(ŋ)atn-man min koton te:rŋ-ař werŋa-ř
'My uncle killed a wallaby with a boomerang'

Ŋan ka:l-a ŋatn-man kuta te:rŋ-ař yuk toŋkn ŋatn-man
'My uncle killed a dog with my stick'

Pam kal-mele naŋn-man kuta tok ŋatn te:rŋ-ař yuk toŋkn naŋkn-man
'His uncle killed my cat with your stick'

Pař'r pam munt ŋatn-man te:rŋ-ař kuta naŋn man yak-iř
'My cousin killed his dog, cut its throat'

Ŋanam-(ŋ)atn-man te:rŋ-ař pam kuñaŋkar ŋatn man petn penpn-tř
'My mother punished my brother with a flat belt'

John-tř pa:nt kuñaŋkar pork warkm-iř pař'r kuñaŋkar ŋatn-man-tam werŋ-a-ř
'John, my small brother, chased his big sister with a boomerang'

(continued)

Ŋanam punt(m)e:nmř̃ ka:r-p yik Jim-tak pam tu:mp ŋanamajim-ak
'My stepmother does not speak to her husband, Jim'

Ŋan pinř̃ naŋn-man ŋok mi'iř̃ ŋan wila ŋatn-mantam
'His aunt took the water from my young sister'

Ŋan ma:ra, E:ytna ŋatn wu:n naŋanam katam-ak, Molly-ak
'My cousin, Edna, lives with her stepmother, Molly'

Kalin, kana-nt(ŋ)ay min mantmant nak-na na:t-nan-(ŋa)y
'Mother, I'll try whether I can see the bird'

Ŋan pam pil-wete oŋkoř̃ nak; ŋay pa:nt pil-wete naŋkn
'Don't look at me, fa-in-law; I'm your daughter-in law'

Kalin, nul ŋan ŋulyiř̃ na:t-ř̃ta 'Mum, he nearly saw me'

Polly: Tapař̃ wo:joř̃um pelnan pam munt ŋatn-mak-n (peln)
'Their lightning story, from my cousins'

Pař̃'r yo:ř̃ naŋkn pam manu pork 'Your son's a big boy now'

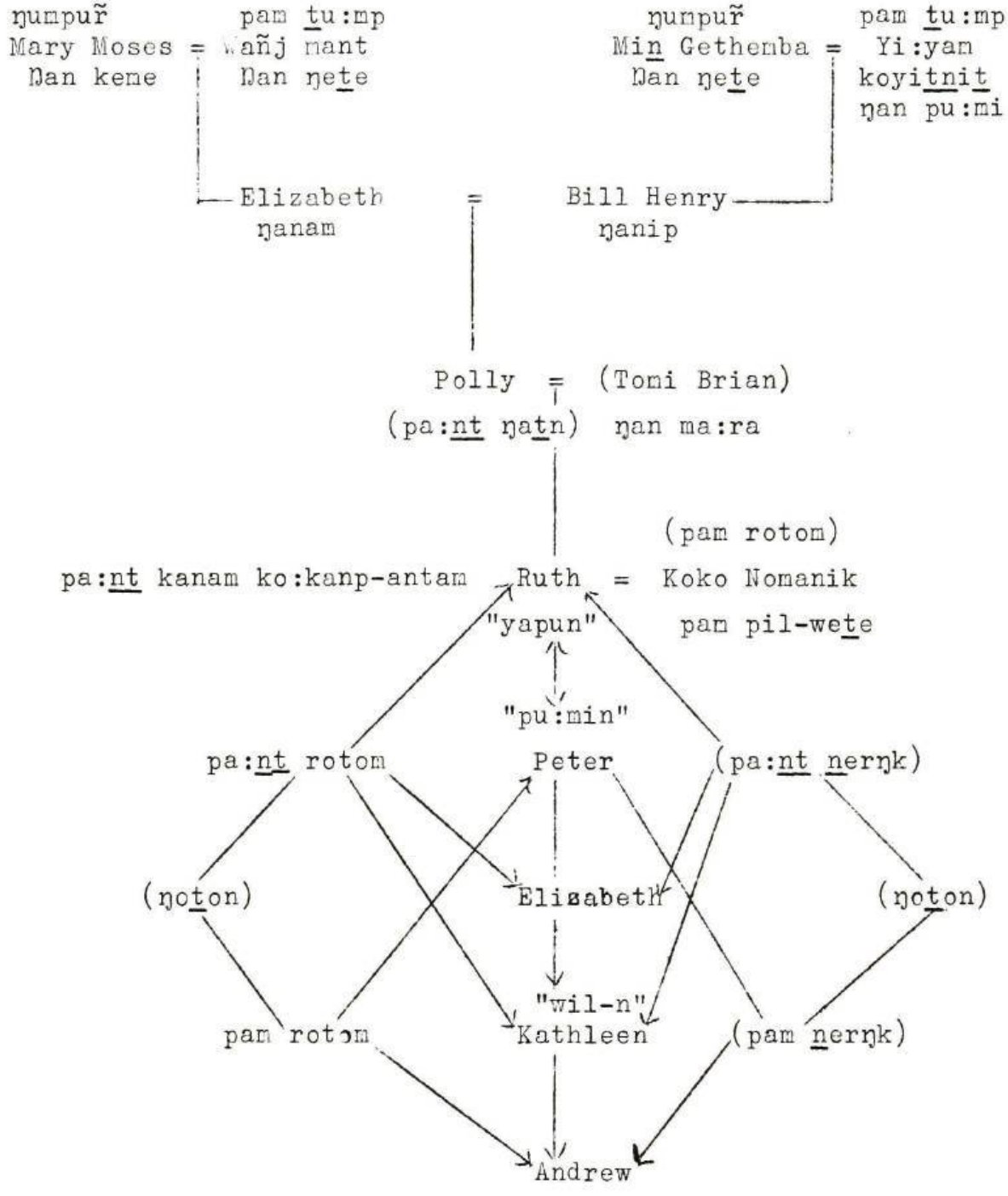
Edna: Ŋanip-atn ku:k Ta:yoř̃-e yik-m; ŋanam-atn ku:k Ta:non yik-m
'My father used to speak Ta:yoř̃; my mother spoke K. Minjana'

Clem: Ŋanip-atn ku:k Ta:yunt yik-m; ŋanam-atn Pornpur-ra:w wun-m ra:k naŋunp pel-nan E.R.M.-ak; ŋanip-atn Penkeltanum wun-m pali-pan Riř̃'ant, Chapman River-ak.
'My father spoke Ta:yunt; my mother lived at P, their place there at E.R.M., on the south side at R. on the Chapman'

Edna: Ŋanip-atn wun-m Kutji palipan Riř̃'ant, Chapman River-ak; ŋanam-atn wun-m Melaman River-ak, Taŋknit.
'My father lived at Kutji, south bank of the Chapman River at R.; my mother at M., Taŋk-nit'

Polly Brian (ego)

Parents and children:



(Table 61)

5.3.3 Adverbs (and Directionals)

i:	'there' (that there)	Loc, Dem
i:-kan	'up there, on top, above"	Loc, Dem
i:-kaw	'east there'	Comp, Loc
(pu:ŋ) i:-kaw	'before dawn, sun in east'	Comp, Time
i:-kop	'bottom, on ground, down there'	Loc
i:-koř	'back there, outside'	Loc
i:-kuw	'there in west'	Comp, Loc
i'i	'(this) here"	Loc, Dem
i'i-ř-a	'go . . here'	'Direc'
i'i-wal	'from here, come from here'	"
i-l-aw-un	'come from the east, from sunrise'	Comp, Direc
i-l-i-pan	'come from other bank, south'	River-direc
i-l-i-pař	'come from south there'	Comp, Direc
" -aw	'come from far south-east'	" "
" -op	'comefrom river in south'	" "
" -uw	'come from south-west'	" "
i-l-iŋ-kan	'come from the north bank'	(See il-uŋ-kan)
il-nen	'from on top, down from above'	Direc
il-op-on	'come from down below, from under'	"
i-l-uŋ-kan	'come from north bank'	River-direc
i-l-uŋ-kař	'come from far north'	Comp, Direc
" -aw	'come from far north-east'	" "
" -op	'come from river in north'	River, Comp
" -uw	'come from far north-west'	Comp, direc
i-l-uw-an	'come from west'	" "
in'	'this (here)'	Dem
in'n	'this' (here)	"
in'naka	'here, this here'	"
in'nemen	'from here'	"
in'nemen-mam	'from here'	Dem + op, Direc
in'nul	'it, here, this (erg)	Dem, Loc

in'nun-t	'this here'	Dem
in'nuŋun	'to (this) here, in here'	Dem, Dir
int	'this'	Dem
i:-nun	'that (there)'	"
i:-nun-p	'that (there) again'	Dem + Asp
i:ŋ-kan	'there at north bank'	River-dir
i:ŋ-kaɾ̃	'there in the north'	Comp, Loc
" -aw	'there in north-east'	" "
" -op	'down river in north there'	" "
" -uw	'there in the north-west'	" "
i:-pan	'there on south bank'	River-loc
i:-paɾ̃	'there in south'	Comp, Loc
" -aw	'there in south-east'	" "
" -op	'down river in south there'	" "
" -uw	'there in south-west'	" "
i:-ɾ̃-a	'go to there, go this way'	Dir
i:-ɾ̃-i-pan	'go to south bank there'	River-dir
i:-ɾ̃-i-paɾ̃	'go to the south there'	Comp-dir
" -aw	'go to the south-east there'	"
" -op	'go down south to river'	Riv-dir
" -uw	'go to south-west there'	Comp, Dir
i:-ɾ̃-kan	'go to place ontop, above'	Direc
i:-ɾ̃-kaw	'go to the east there'	Comp-direc
" -an	'10 am, midmorning, sun from east'	Time, dir
i:-ɾ̃-kop	'go down hill, inside, below'	Dir
i:-ɾ̃-koɾ̃	'go to outside, go behind, beyond'	Dir
i:-ɾ̃-kuw	'go to the west'	Comp-dir
i:-ɾ̃-kuw pu:ŋ mu:nt-nan	'Sun's going to set in west'	Time
i:-ɾ̃-uŋ-kan	'go to the north bank'	Riv-dir
i:-ɾ̃-uŋ-kaɾ̃	'go to the north there'	Comp-dir
" -aw	'go to north-east there'	"
" -op	'go to river in north there'	Dir, Comp
" -uw	'go to north-west there'	Comp-dir

it	'that (there)'	Dem
i:-tiŋ-kan	'there at side of north bank'	Riv-loc
i:-tiŋ-kař	'there on north side'	Comp, Loc
" -aw	'there on north-east side'	" "
" -op	'there down river on north side'	" "
" -uw	'there on north-west side'	" "
i:-t-i-pan	'there on side of south bank'	Riv-loc
i:-t-i-pař	'there on the south side'	Comp-loc
" -aw	'there on south-east side'	"
" -op	'there down river in south'	Riv-loc
" -uw	'there on south-west side'	Comp-loc
i:-wal	'coming from there'	Dir
i:-wuŋ-kař	'there ... the north (Aurukun)'	Comp-loc
i:-wuř	'other, there'	Loc
jir	'out'	Adv
jiř	'(came) out from'	Adv
jun	'up'	"
jur	'across'	"
kak	'possessive marker'	suffix
-kan	'on top, above'	Adv Loc
kan-am	'on top, senior, before, ahead'	Adv, Loc, Time
kana-ŋk-a-ř	'long ago'	Time
kana-tř	'punctiliar, perfective marker'	Adv
kan-p	'top again, above'	Loc + asp
kanpa(-t)	'first, before, previous'	Time + foc
kanp-anp-ař (yan)	'(walk) ahead, before'	Loc
ko:w-kanpa	'previously, before'	Time
kapir	'the moon'	Noun
kapir-nř	'just, only, the moon'	Time, Descr
kapir pu:kam	'the new moon (crescent)'	'Time
kapir ko:w-kantim	'first point of the moon'	Time, Lunar
kapir kana pi:nt-iř	'the moon has waved, grown'	Time, Lunar
kapir i:wal kana rirp-nat	'moon came out from there'	Time, Lun

kapir kana ko:w-riŋ(a) pat-ař	'full moon'	Time, Lunar
kapir kana wařam-r	'the moon has waned, decreased'	" "
kapir maŋr ŋamal	'moon waning (smaller)'	" "
kapir kana wonp-r	'the moon has waned, died'	" "
kapir me:r min	'bright moonlight'	" "
kapir penpan	'flat moon; third quarter, big and white'	" "
kař	'north, year'	Loc, Time
kař-man	'last year'	Time
kař-man int kanpa	'three years before'	"
kař-man int	'two years before'	"
kař-man kanpa	'last year'	"
(ra:k) kař-t-m	'after the wet'	"
(ra:k) kař-t-m kanpa	'year before the wet'	"
kaw	'east'	Comp, Loc
(pal) kaw (kal)	'(bring up) from the east'	" , Direc
kaw-kaw	'farther up east'	Loc
kaw-uř	'just over east'	"
ken	'above'	Loc
ken-en (mi'iř)	'(sing) loudly, above'	Manner, Loc
ko:(w)-kanpa	'in front, leading, before'	Loc, Time
kon	'round, short'	Adj
ko-kon	'mixed, really stumpy'	"
kop	'under, down, beneath'	Loc
kop-an-tam	'from bottom side, at end of'	Loc + op
kop-kop	'low-down'	Loc, Manner
kop-aŋ-k-ř	'bottom side, inside'	Loc
kop-on	'down, upside down'	Loc, Mann
kor(o)wo	'across (in arms)'	Loc, Mann
koř	'beyond, behind, outside'	Loc
koř-e	'behind, outside, that side'	Loc + direc
koř-kanpa	'before'	Time
koř-koř	'away, kept on all the time'	Asp, Mann
koř-ow (=koř-na)	'outside'	Loc (+ op)

koř-aŋk-a-n	'behind, after, late'	Time, Mann,Loc
ko:w	'point, edge, nose, turn off'	Noun, Loc
ko:w-kanp	'before, short while ago'	Time
Ko:w-kanp	'before, short while ago'	Time
ko:w-pi:nt-n tepul-ak	'at end, edge of table'	Loc
ku(t)j	'outside'	Loc
kun	'base, rear, seat, bottom'	Loc, noun
(pu:ŋ kana) kun-a (ni:n-r)	'(sun has set) down'	Loc + op
kun-koř-e	'back home, reverse (truck)'	Loc + op
kun-anp	'straight forwards, towards'	Mann, Dir
(kun-kun-anp	'upright'	Manner)
ra:k kuŋ-kuř-m	'from the north side (Muŋkan)	Comp, Dir
" " -n	'to the north side	" "
kun-maŋk	'at root, at bottom'	Loc
kuw	'west'	Comp, Loc
kuw-al	'from the west (come)'	Comp, dir
kuw-kuw	'farther west'	" Loc
kuw-uř	'just over there in west'	Loc, Comp
lup	'in(side)'	Loc
maŋar	'out of sight, afar, distant'	Loc
maŋk	'low, down, halfway down'	Loc, degree
melnk-ař	'tomorrow'	Time
melnk-elnk-ař	'tomorrow'	"
miñjŋul	'afternoon, evening'	"
murm	'under (water)'	Loc, Manner
mut-kop	'down here, island'	Loc
mut-oŋk-on	'behind (my) back'	"
naka	'here, in this place'	Loc
naŋunp	'there'	"
nemɛ̰n	'from here'	Direc
neman-p	'from here again, still'	Dir + asp

-n(u)ř	'only, just'	Time, Asp
-n(u)ř-p	'same again, same place'	" Asp, Loc
(ŋ)a-ŋař	'everywhere', 'still'	Loc, Time, As
ŋař-i'i	'now, still here'	Time, Asp
ŋař oŋkoř	'not yet, still don't'	Time, Asp
ŋa(w)-	'emphasis marker'	Demon
ŋaw-i:	'there'	Loc, Dem
ŋaw-i'i	'here'	" "
ŋaw-i'i-ř-a	'go to here'	" "
ŋaw-i:-nun	'to that there'	Dir, Dem
ŋaw-in'	'this here'	Dem, Loc
ŋaw-in'n	'this here'	" "
ŋaw-int	" "	" "
ŋaw-in'naka	" "	" "
ŋaw-in'nemen	'from here'	Dem, Dir
ŋaw-in'nul	'this (erg)'	Dem
ŋaw-in'nun-t	'this it (obj)'	"
ŋaw-in'n-ŋun	'to this here'	Dem, Dir
ŋaw-it	'that (there)'	Dem
ŋaw-ulp	'that there'	"
ŋaw-ulp-t	'it's that (one) there'	"
ŋerŋkan	'yesterday'	Time
" kanpa	'day before yesterday'	"
ŋerŋk-erŋk-an	'morning'	"
ŋerŋk-erŋk-erŋk-an	'early morn, about 6 am'	"
ŋerŋkan ŋurnt-urnt-uř	'last night'	"
ŋi:	'there'	Loc, Dem
ŋi'i	'here'	Loc, Dem
ŋi'i-ř-a	'go from here'	Dem, Dir
ŋit	'that (there)'	Dem
ŋok in'nunt ku:mp	'water is deep there'	Tidal
(ŋok min)	'good tide'	"
ŋok ŋurnt-urnt-uř pal yan	'Tide came in at night'	"
" " " ya:ña	'Tide went out at night'	"

Ŋok ŋurnt-urnt-uř yan i:ña	'Tide went out at night'	Tidal
" pi:piř	'low tide'	"
" pot-e	'at dry water'	"
" ta:w-kan	'high tide'	"
(ŋok ta:w-kop)	'low tide'	"
ŋok ta:w-munjun	'heavy tide'	"
(ŋok ta:w-roroŋkř)	'light tide'	"
ŋok wa:ř	'high (bad) tide'	"
ŋok ya:ř-a te:rk	'water went away back'	"
(ŋok ya:ña yan)	'water went away out low'	"
ŋok yu:-kuw	'water far west (low tide)	"
ŋo(r)ŋoř:ur	'all day long, still'	Time, Manner
ŋul(ŋul)	'later, by and by, afternoon	'Time, asp
ŋul-mař	'everywhere'	Loc, mann
ŋul-naŋun	'after that'	Time, Asp
ŋul(u)p	'there again, that again'	Dem + asp
ŋul-t	'it's that, it's later'	Dem, Time
ŋul-ul	'afternoon'	Time
ŋulyiř	'nearly, almost'	Av, Degr, Asp
ŋurnt-urnt-uř	'night-time'	Time
ŋurnt-ŋurnt-urnt-uř	'5 am, early sunrise'	"
okun	'might, perhaps'	Mann, Asp
(ŋ)oŋkoř	'don't'	Asp, Neg, Imp
-p	'again, same, still'	Aspect
pak-un	'(bury) down (hole)'	Loc
pal	'come'	'Dir, Verb
pal-aw-an	'come from the east'	Comp-dir
" "-un	'come to east'	"
" -i-pan	'come from south bank there'	Riv-dir
" -i-pař	'come from south there'	Comp-dir
" " -aw	'come from south-east there'	"
" " -op	'come from river in south'	River-dir
" " -uw	'come from south-west there'	Comp-dir

pal-kan	'come from on top'	direc
" -kaw	'come from east'	Comp-dir
" -kop	'come from below, down under'	Dir
" -koř	'come from behind, outside'	"
" -kuw	'come from the west'	Comp-dir
pal-pal	'come close up, forward a bit'	Direc
pal-t-i-pař	'come from south side'	Comp-dir
" " -aw	'come from south-east side'	"
" " -op	'come from river on south side'	Riv-dir
" " -uw	'come from south-west side'	Comp-dir
pal-t-uŋ-kař	'come from north side'	Comp-dir
" -aw	'come from north-east side'	"
" -op	'come from river on north side'	Riv-dir
" -uw	'come from north-west side'	Comp-dir
pal-uŋ-kan	'come from the north bank'	Riv-dir
pal-uŋ-kař	'come from the north'	Comp-dir
" -aw	'come from the north-east'	"
" -op	'come from river in north'	Riv-dir
" -uw	'come from the north-west'	Comp-dir
pal-uw-an	'come from the west'	Comp-dir
pal ya:ř	'walk-come' (round about)	Dir, Loc
pan	'south bank'	river-loc
pař	'south'	Cmps-loc
paw (pal mi'i)	'(pick) up'	Dir
pen, pun	'flat'	loc-particle
pil	'hip, side'	Loc
pil-un	'(to) alongside, beside'	Dir, Loc
(yu:r) pinal-ma	'for three days'	Time
pon	'down again'	Dir
pu:ŋ	'sun'	Noun, Time
pu:ŋ i:-kaw	'just before dawn'	Time
pu:ŋ i:ř-kaw-an	'midmorning 10 am'	"
pu:ŋ kana mu:nt-iř	'sun has set now'	"
pu:ŋ kana kun-a ni:n-r	'Sun has set down low now'	"

pu:ŋ kana mat-ař	'sun higher now, 8 am'	Time
pu:ŋ-mař	'always, every time'	"
pu:ŋ me:r termp-on	'early afternoon, 3 pm'	"
pu:ŋ-n(u)ř yat	'only sun shone'	"
pu:ŋ putp(u)n	'sun on top, above, noon'	"
(i:ř-kuw) pu:ŋ mu:nt-nan	'Sun's going to set in west'	Time
pu:ŋ toŋk-un	'10 am, sun half-way'	Time
puŋuk	'last week' (month)	"
" kanpa	'week before last'	"
(ra:k) puŋk yup-up	'all the time'	", Aspect
puř	'down'	Loc, Dir
putp(u)n	'on top, above'	Loc
ra:k	'time, place, thing'	General nn Time, Loc
ra:k kařt-m	'from, after, the wet season'	Time
ra:k koř mir-i	'dusk, sunset, after sundown'	"
ra:k me:r ŋerŋkan	'just about dusk, getting dark'	"
ra:k man kana tan-nat	'before dawn, 5 am, brightening'	Time
ra:k ŋerŋka pinalam-ak	'before 2 nights ago'	Time
ra:k puŋk yup-up	'all the time'	" , Asp
ra:k til	'next time, another time'	"
ra:k toŋk-on	'near dawn'	"
ra:k yi:ř	'another time, different time'	"
ritar	'for a little while'	Time, asp
row tak-ař	'left here alone, behind'	Loc
rowun kanpa	'infront'	Loc
ruw-an	'from here; to meet'	Verb (caus)
ruw-uw	'meeting'	Verb-redupl
ta:piři	'close, here, at hand'	Loc, mann
ta-turma	'beside, close together"	Loc, mann
taw-an	'until'	Time
ta:w pork-man	'really dark now'	"

		/Asp
ta:w-taw-an	'every time, always, repeatedly'	Time, mann
(te)-le	'now, my turn, next, go on'	Asp
(pam) ti-pař-m	'(man) from south side'	Comp, Loc
tirm-n	'down the hill'	Dir, Loc
tono(t)oŋko	'for one night'	Time
toŋko	'half-way'	Loc, Time
toŋk•n	'come half-way, this side, behind'	Loc, Dir
toř̃k-r	'far, distant'	Adj, Adv,Deg
ulp	'that'	Demonstr.
ulp-t	'it's that one'	" + foc
ulup	'that (one)'	"
ulup-t	'it's that one'	"
watpař̃	'close'	Loc, Degr
wař̃-e:kama (kanpa)	'last year' (before that)	Time
werŋka	'between, in middle, central'	Loc
wop (=kop)	'under, below'	Loc
wuř̃	'year, get up, out'	Noun, Adv
wuř̃ kutiř̃	'two years'	Time
wuř̃ moŋ-tak	'many years ago'	"
wuř̃ yo:ř̃	'last year'	"
wuř̃ yo:ř̃ kanpa	'year before last (year)'	"
wut-ŋul-man	'midnight'	"
wut-uř̃	'through, narrow, not wide'	Loc, Adj, Dir
yan	'move, travel, shift'	Verb (motion)
ya:ř̃-a	'go away'	Dir
ya:ř̃ i'i	'go here, this way, like this'	Dir, Mann

ya:ř-i-pař	'go away to south'	Com-Dir
" -aw	'go away to south-east'	"
" -op	'go away to river southwards'	Riv-dir
" -uw	'go away to south-west'	Comp-dir
ya:ř-uŋ-kař	'go away to north'	"
" -aw	'go away to north-east'	"
" -op	'go away to river northwards'	"
" -uw	'go away to north-west'	"
(ya:ř-uŋ-kan)	'go away to north bank'	(Riv-dir)
(y)i:	'there, yonder'	Loc
yi:ř-am	'sometimes'	Time, Asp
yi:ř-aŋ-n	'another way, different route'	'Loc, Mann
yo:ř	'today, now, before'	Time
yo:ř-n(u)ř	'only today'	Time, Asp
yo:ř-t	'it was today'	'Time'
yu:-kan	'away up high'	Loc
yu:-kaw	'away in east'	Comp-loc
yu:-kop	'away deep down, afar at river'	Loc
yu:-koř	'away behind, beyond'	Loc
yu:-k-(u)řa	'next time, next week'	Time
yu:-kuw	'away in the west'	Loc, comp
yu:-kuw-kop	'long way down, right out in sea'	Loc
yu:ŋ-kan	'away on north bank of river'	Riv-loc
yu:ŋ-kař	'far away to north'	Com-loc
yup	'soon, by and by, later'	Time, asp
yup ŋa:tiř	'not yet, later (still)'	Time, Asp
yu:-pan	'away on south bank'	Riv-loc
(yu:-pař)	'WASTING TIME'	(Manner), Vb
yup-al	'come soon'	Dir, Time
yup-ow	'soon, eh?'	Time
yup(y)up	'later, about 3 pm, all day'	"
yu:r pinal-ma	'for three days'	"
yu:ř-a (yup yan)	'(be) home there (soon)'	Direc

yu:-r̃-i-pan	'go away far to south bank'	Riv-dir
yu:-r̃-i-pař	'go far away to south'	Comp- dir
" -aw	'go far away to south-east'	"
" -op	'go far to river in south'	Riv-dir
" -uw	'go far to south-west'	Comp-dir
yu:-r̃-kan	'go far away up'	Direc
yu:-r̃-kaw	'go far away east'	Comp-dir
" -kop	'go far deep down below'	Dir
" -koř	'go far away behind, outside'	"
" -kuw	'go far away to the west'	Comp-dir
yu:-r̃-uŋ-kan	'go far away to north bank'	Riv-dir
yu:-r̃-uŋ-kař	'go far away to north'	Comp-dir
" -aw	'go far away to north-east'	"
" -op	'go to river in far north'	Riv-dir
" -uw	'go far away to north-west'	Comp-dir
yu:-t̲-iŋ-kan	'go far away to side on north bank'	Riv-dir
yu:-t̲-iŋ-kař	'go far away to north side'	Comp-dir
" -aw	'go far away to side on north-east'	Comp-dir
" -op	'go far away to side near river'	Riv-dir
" -uw	'go far away to side on north-west'	Co mp-Dir
yu:-t̲i-pan	'go to far away side on south bank'	Riv-dir
yu:-t̲i-pař	'go far away to side in south'	Comp-dir
" -aw	'go far away to side in south-east'	"
" -op	'go away to river on far south side'	Riv-dir
" -uw	'go far away to side in south-west'	Comp-dir
yu:w	'afar, distant, absent'	Loc
yu:-w-al	'come from far away'	Dir
yu:-w-ur (t̲oŋk-o-n)	'away far out (half-way) to sea'	Loc

5.4 SAMPLE STORY FROM THE ORAL TRADITION

This short story shows typical material, layout, and morpheme delineation of the taped corpus.[1]

5.4.1 Joseph Pita's "Wallaby" story[2]

(Ku:tip naŋn Joseph-kak)

/Pam kutiř pul / min koton ko'o-m pul / ko'om
men two they-two wallaby killed they killed

pul / ŋul pul, kan-an tan-nat pul / ŋul pul-t
they-2 and they fence-trap stood they and THEY

min ke'e-ř / kamp-ař pul, naŋunp pa:t ti:k-ař
animal killed cooked-in-oven they there firewood broke

pul / ŋul pul ya:ř-a yat pul / wa:t-iř pul
they and they-2 away went they looked-round they

ko:ř / ko'o-nat pul til / ke'e-ř pul / min /
behind speared they again speared they animal

naŋunp / rint-iř pul / pa:t / ti:k-ař pul /
there roasted they firewood broke they

ŋul pul / kirk-a-tř ko:ř wa:t-m / min i:ř-kaw
and they for a spear behind searched animal went east

yat pul / ŋul pul ko:ř wa:t-iř / min-p, wuw-
went they and they behind searched animal-still met

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[1] A transcription of all tapes will be coordinated later.

[2] From tape IX (ex IIa), Band 5; taped Palm Isd, Nov., 1966.

nat pul / ŋul pul naŋunp te:rŋ-nat / kirk pul
did they and they there killed-it-did spear they

na:t-nat pul kirk (ŋ)aw-in'n wu:n / kirk pu:ŋk /
s a w they spear this-here lay spear half-broken

min yu:w yat / min pok-on / wa:t-iř pul /
animal away went wallaby none searched they-2

ya:ř-a yat pul / wa:t-iř pul / ŋul pul tak-ař
away went they-2 searched they and they left-

/ min-p want-an okun aŋař-(ŋ)ak wun / tak-ař (pu)l,
off, animal to where might still let it be left-it-they-two

/ pu:ŋ kana yat / pu:ŋ mu:nt-iř-(ŋu)l / ŋul
sun has gone sun set-down it and

pul ŋurnt-urnt-uř miñj-ŋul / tak-ař pul / aŋař-
they by night evening left-it-did they still

(ŋ)ak-(ŋ)al; "Ŋal kana te:rk!" / Ŋul pul ya:ř-a
let-it-be we 'You and I better return' and they away

te:rk-r nakn-kat-an. / Pa:nt, pař'r wuw-nat pul,
returned to camp Women children met-did they

ni:n-r patp-iř pul / ŋul pul ulp / min-a /
sat-down slept they and they these hunting

til pul yi:ř-am ko'o-nat pul / ke'e-ř pul /
again they-2 different one killed they killed it they

naŋunp mu:ŋk-m pul / ka:mp-ař pul, ka:mp-m pul /
there ate they cooked-in-oven they cooked they-2

naŋunp rint-m pul / ŋul pul ya:ř-a yat / miŋ-a
there roasted they and they away went hunting

/ ŋul ulp miŋ mu:ŋk-ař - (p)ul tak-ař pul / ŋul
and these animal ate-did- they-two left-it they and

pul - (n)aŋunp / te:rŋ-ař-(pu)l / yu:-ř-uŋ-kař-aw yat
they there killed-it-they-two went far to N.E. went

pul / ŋul i:ŋ-kař-aw-t / ni:n-(n)at pul kerp-r /
they and there in N.E. sat-did they finished

pal (t)e:rk / pal te:rk-r / maŋk - wařk-nam pul /
returned came back did went-wandering-round they

pul ulp-t tak-ař - (p)ul / ŋul pul ni:n-r mutatan
they these left-off they-2 and they sat-down for-good

ni:n-nat pul / ya:ř-kaw te:rk-r ŋul / ŋul pul
did stay they-2 went east returned they-two and they

nakn-kat-a-n, kana pul / naŋunp wun-m / ŋul(p)ul
to the camp did they there staying and they

kana(ŋ), yat pul ya:ř-a / naŋunp /;
did went they away there

Pokon le, kerp-r ////
Nothing more, finished

Free translation of the sample story:

"Those two men were killing a wallaby; and they stood at their bush-trap and it was they who killed the animal. They cooked it in a stone-oven there, having broken firewood and away went they two. They searched round for the track and speared again an animal there and cooked it and roasted it after having broken firewood. And with spears, they went searching back on the track for it, going eastward. They two went and returned to the track to search, and met an animal. And they struck it there. They saw the spear and this spear lay half-broken, snapped as the wallaby ran off with the other half.

There was no animal so they searched around and went off still searching, till they gave it up. 'Where might that wallaby be still; too late now!' They stopped trying for the sun had gone down and had set. And they, in the late afternoon did leave it, letting it be, meanwhile. 'You and I had better return now' and they went away back to camp. They met women and children and the two sat down, and slept.

They looked for that animal again, but they speared and killed another one. They ate it there and had cooked it in a ground-oven. There they roasted it, and they went off hunting and those (boys) ate that animal and they two left off and they there speared it. They went far off to the north-east, and there in the north-east, they did stay quiet, having come back again. Then they went roaming round but stopped there and stayed there for good. They remained there, back to the east to stay there at the camp for good. So those two went away there.

That's all, there's no more; it's finished."

Joseph Pita

6.0 DISCUSSION OF THE RESULTS

Analysis of the raw field data required clear division of these materials into phonology, morphology, syntax and semantics. This synchronic study of a living Aboriginal vernacular has processed the different kinds of utterance by applying principles of descriptive linguistics.

Had there been earlier lists or descriptions left by the pioneers, it might have been feasible to say something about diachronic internal changes in Thaayorr. Much greater change is to be expected within the present generation because of the large number of alien speakers of this vernacular living in the Edward River community.[1] A culture-blend has developed as the clans live and work and play together.

Recurring morphs in this language may be grouped and regrouped to make many shades of meaning. But as individuals adapt consciously to their changing environment, the younger generation particularly, make changes in the mother-tongue whose atmosphere it imbibed by imitation, during infancy. Such a process is influenced strongly by the diversion of the individual's inbuilt capacity to language.

The present analysis of new language materials has made Thaayorr less exotic to the linguist. Thus, the discovery of emic patterning not only manifested the multiplicity

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[1] A later study should show how much mutual correlation exists between the 16 or 17 dialects spoken at Edward River. Consult Appendix C for a brief comparison of 14 vernaculars.

of utterance variants, but suggested that community differences from clan to clan, might be responsible for some of the numerous details in which Thaayorr seems to differ from other Paman dialects now assembled into one communal home.

6.1 The phonology of Thaayorr

Segmental phonemes conform to the established Aboriginal pattern of stops, nasals, liquids and glides. Retroflexion, stemming from the apico-domal continuant, does not affect alveolar allophones extensively, but the isolated presence of /r/ is prevalent in both marginal and nuclear slots of the syllable. Every possible nasal and stop allophone helps to shape a symmetrical pattern of syllables by combining with a full and balanced set of vowel allophones.

The most common stops are /k/ and /p/, and the most common nasals are /n/ and /ŋ/; /l/, /n̲/ and /r/ are the next common in that order, but /l/ is rare word-initially. The two-syllabled word contains a majority, 47%, of the consonants, being twice as numerous as in the three-syllabled word (24%). Of the nasals assimilating to their stops of the same point of articulation, /n̲t/ and /mp/ are more common than /ŋk/ and /nt/. But /ln/ exceeds them all, and /lp/ and /rk/ also rival these.

Other sequences, word-medially, identify /r̃k/ as more numerous than the nasal + stop combinations. /np/, /nn̲/, /t̲n/ and /rk/ occur frequently in this way, or word-finally. CCC-clusters vary in frequency because of the specific words in which they occur: e.g. /ñjn/, /n̲'n̲/, /rkr/, /r̃'r/, /rn̲t/, /lpt/ and /lnk/ have high frequency of occurrence. Their single segments manifest C_1 mostly as ñ, r, n̲, m, ŋ and l; C_2 as j, k, p, ', n and t; C_3 as r, n̲, n, t̲, m and k. Order of total frequency in CCC-sequences is /r/, /n̲/, /n/, /k/, /j/ and /p/. For

multi-consonant sequences, the order of frequency places them as: /r/, /n/, /j/, /k/, /p/ and /r̃/.

All vowel contrasts are conclusive in stressed syllables, but the five-way division in quality reduces to three-way for unstressed syllables. Further, unstressed vowels tend to harmonise with the stressed vowels preceding them. But the feature of retroflexion strongly conditions all vocoids. This is so marked that all vowel contrasts include words having /r/ as one of the segmental components. Other characteristics of the vowels and consonants are the mutual conditioning according to point of articulation, the number of transitional phones, and 'backing/fronting' of vocoids as well as contoids.

It is noteworthy that the most common vowels are /a/, /u/ and /i/ (36%, 20% and 12%), and that the least common are /e:/ and /o:/ (2% and 1%). This may be support for the theory that Cape York vowels also were once limited to three phonemes. This study shows the consonants are twice as numerous as the vowels, but through the elision of initial consonants, the proportion of vowels to consonants is raised slightly.

Syllable structure is almost exclusively consonant-initial. Although vowel-initial words exist, they are comparatively rare and sometimes have an initial /ŋ/ or /y/. Variant syllables may have syllabic consonants as nuclei. At least half the consonant phonemes may occur as syllabics, /m/ and /p/, /n̲/ and /t̲/, /n/ and /l/, /r/ and /y/, (and sometimes /n̲/ and /r̃/). More than half the words in the language are only one-syllabled. One third of the words are two syllabled; of the remainder, most are three.

Syllable onsets have been counted. /ŋa-/ is the most frequent, followed by /ka-/, /ŋu-/ and /n̲u-/, and then /n̲a-/,

/pa-/ and /pu-/. Vowel-initial syllable codas manifest the most frequent sequences as /ul/, /aɾ̃/, /un/ and /al/. Word onsets show that the most frequent consonants are /ŋ/, /p/, /n̲/, /k/ and /y/. Initial CV-sequences manifest the most frequent vowels to be /a/, /u/, /i/, and /a:/ and /i:/, while the least common are /e:/ and /o:/.

Word-structure by syllables shows a mere score of words of the CV shape. The CVC pattern is extremely frequent, and the CVCC almost equally so. The CVCCC pattern is almost certainly limited to less than thirty words. Vowel-initial syllables introduce mainly the shorter words (up to four-syllabled words sometimes), and seldom for VCCC, except in one and two syllabled words. Consonant-initial syllables (except CVCCC) may occur in any syllable slot in any word, i.e. CV, CVC and / CVCC.

Intonational patterning has already been described at length, but a few generalisations are pertinent:

(i) The P-syllable does not always correspond with the emic syllable.

(ii) Transitional vocoids (and contoids) exert a frequent influence on the flow of speech.

(iii) Elision of word-initial contoids (and some vocoids) gives a fluidity to Thaayorr speech utterances.

(iv) The lack of vowel sequences and glides (together with the many syllabic contoids), characterises this language.

(v) Nuclear peaks of words, phrases, clauses and utterances are clearly marked by the interplay of pitch, loudness and length, but not necessarily all three at once.

(vi) Phonemic length may be modified by phrase features just as morpheme-initial stress is increased or decreased by loudness dictated by the stress-rhythm of the utterance.

(vii) Pitch is raised for emphasis, focus, excitement, nuclear loudness of a syllable, distinction of an interrogative 'marker' or redundantly with stress and length.

(viii) Intervocalic stops are mostly unaspirated and geminately longer, though not necessarily in double function.

(ix) The phoneme /r/ may be both syllabic and syllable onset at the same time: e.g. /wa:-wa:t-r-y/ 'I looked round', ['wɑ:-wɑ:tr̩.ry] for /wa:-wat-r(na)y/.

(x) Intonational contouring shows basic pattern; the principal contour types are those marking stative and interrogative contextual sentence types and emphasis, and those accompanying expressions of anger, pleasure, surprise, fatigue and embarrassment. Disposition is reflected in the different rate of utterance which, for comparison from sample to sample, may be taken as the nett average phone-length.

(xi) Terminal contours exist in the mind of the speaker. They are the conclusive, the continuative, the alternating and the emphatic. As usual, emotive loading may or may not affect them.

(xii) Stress-rhythm, with compensatory fluctuation of suprasegmentals, serves to mould many utterances according to the mood of the speaker. This feature is responsible also for the variant speed with which whole strings of syllables may be uttered. It is as if an invisible conductor were beating time while the speaker produces his balanced measures.

Finally, the analysis of phrase/clause patterning by mechanical means is more accurate, acoustically. But this validity can confirm and elucidate findings rather than explain them. Because psycholinguistic factors affect the interpretation of a whole utterance, with its segmental and suprasegmental characteristics, human deduction not only analyses, but also adds to the stimulus. Its reaction consists in 'reading between the lines'. Comparison might be made by having frames

of identical utterances, varied only by the intonational contouring of the speaker(s).

Thaayorr vowels, (and some consonants,) are the syllabics which form peaks to the P-syllable. Every class of phoneme, and every phoneme individually, has different length and intensity which are measurable. But some syllable onsets show greater fusion with their syllabic nucleus, and such borders are less distinguishable. Just as syllables and words have pitch crests, so whole phrases show 'nuclear' contouring. These vocal leaps are best measured in semitones, but their ratio is still consistent, being relative.

6.2 The grammar

The outline of grammatical structure (5.2), reveals a hierarchy of levels, intrinsic to every utterance.

a. These Thaayorr narratives are favourable to syntactic analysis by tagmemic principles. A brief sketch is: [1]

Clauses are assembled paratactically by loosely linking them together with /ŋul/ 'and, but, yet, so, then'. Occasionally, embedding occurs, e.g. parenthetic comments, modifications to an utterance, assurances, or explanations. Because of this, nuclear/peripheral difference in clauses is less overt.

Clause types are mainly transitive, intransitive, equational and compound. The passive transform is lacking, except for a pseudo-passive not dealt with in this work.[2]

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[1] A full description is to be given in a later work.

[2] There actually is a way of suggesting passivity by word-order together with intonational focus.

Basic word-order is very free, but favours the pattern of Subject + modifier + object (+ indirect object) + verb (+ instrument).[1] The interrogative form follows other types, but with the addition of some interrogative marker:

e.g. /Pam ŋorŋur ŋene miñj ka:r mu:nt-r ?/
man dirty why body not wash'
S Int O P

Clause = S:N + Int:/ŋene/ 'why' + O:nn + Pr:V
N = Hn:/pam/ 'man' + aj:/ŋorŋur/ 'dirty'
V = ng:/ka:r/ 'not' + vb:stem + sfx:/-r/.

b. Nouns may denote natural things, names, or lexical classes. Many nouns undergo inflexion: ergatives, vocatives (in kinship only), possession, datives, accompaniment, instrumentals, purposives and gerunds. Operative categories are allative, elative and locative.

c. The pronouns represent the full set of subjective, objective, possessive and dative. Each distinguishes the dual number and each manifests inclusive (I-II) as well as exclusive. Minor affixation provides for solitariness and accompaniment, for emphasis and for dispossession.

d. Adjectives qualify and follow their head nouns. Number is restricted to three numerals supplemented by six words of general numeric significance. Others comprise categories of bodily feeling, quality, character, colour, size, shape, kinship, age, judgment and distance.

e. Bound suffixes relating to directions, movements and locations form an extremely symmetrical pattern which is not

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[1] See section 5.2.2 .

yet fully substantiated.[1] They concern the allative, the elative and locative distinctions and are probably mostly phonologically conditioned and/or dependent on parts of speech.

f. The verb has been divided into classes, those in four conjugations and the indeclinables. Membership in conjugations depends on two factors, the nature of the basic suffix, and the possession of either alveolar or dental n/n̪ in the variant suffix.[2] Reflexives, causatives and reciprocals each have their own distinctive suffix which mostly follows the verb-stem in first order. Aspect is indicated by the use of one or other of 19 morphemes indicating some kind of variation on the time continuum.

g. Adverbs and directionals are well provided for in this language. The cardinal points of the compass, together with river orientation, are precisely signalled by recurring partials which give bearing, motion and distance.[3] These are the only words dependent on prefixes (in three orders). Non-compass directionals also conform to the structure.

h. Demonstratives comprise a concise set of words having a basic dichotomy of 'this/that'. They are subject to inflexion and may have the initial prefix, /ŋa(w)-/, for emphasis (and rhythmic balance); this particle does not take the stress from the basic morpheme. Demonstratives tend to displace the pronoun (third person), e.g. /(ŋ)ulp/ 'that (man)'~ /ŋa-w-ulp/.

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[1] For -nam and the partial /-r̃-/.

[2] A total of 361 verbstems and 58 auxiliaries should be increased considerably when taped materials and field elicitations have been processed completely.

[3] Rivers run generally from the east to the west.

i. The measurement of tides is precisely indicated by the state of the beach, water and foreshore, motion to and fro. Time precision is accurate within the emic situation. Historic time, psycholinguistically, covers a continuum from the dream time up to the future months and years. Each day is described mostly, by (at least forty expressions,) comments on the progress of the sun from pre-dawn to midnight. Relative time is partly temporal and partly aspectual. In contrast to this, lunar mensuration consists entirely of comments on the size, shape and position of the moon.

j. The signalling of interrogation is obtained entirely from four basic markers, /ŋan/ 'what', /ŋene/ 'why', /wan/ 'who' and /wu:mp/ 'did?' with their derivatives. Another, /want-a-n/ 'where (to)', is scarcely derivative. Negative implication is common using /ka:r/ 'not', but obvious interrogation may have no signal at all except the intonational pattern of raised pitch on the focal word. An aspectual marker, /okun/ 'maybe', often suffices.

Thaayorr manifests a freedom of arrangement within the clause and the sentence. Although suffixation is clear and well established, the pronouns cannot yet be classed as stabilized bound morphemes. The transition is in progress while both free and bound pronominalisation exist together. The present analysis treats this tendency as potential elision, of the first consonant, or the bulk of the first syllable, leaving the coda as single consonant or a sequence of |-CC|.

6.3 The lexical characteristics of Thaayorr

Specimen lexical materials for dimensionals and kinship show how rich is the supply of lexemes in some sections of the Edward River culture. Hale's list of Paman cognates contains Thaayorr words which allow lexical comparison of 100 cognates in 30 related Cape York languages.[1]

A brief collation reveals that Thaayorr is more closely related lexically to Wik Mungkan, Wik Me'n, Wik Mumin, Wik Ngatara and Koko Pera. Close similarity exists to Kuku Yimityir, Mulrityi and Ka:ntyu, but only a fleeting resemblance occurs with Yiti:ntyi, Tyirpal and Kiřamay. No lexical correlation shows up with other languages in Hale's list.[2]

Social taboo regulates the use of lexemes with regard to the names of the dead. Words similar to such names are still sometimes forbidden, changed by substitution or metathesized. This study confirms that the vocabulary of childbirth or initiation is a sensitive area provocative of diffidence about any contact with spiritual things.

No lexical markers of high/low, noble/humble or royal/common degrees of politeness exist. Edward River dichotomy is between secret/nonsecret, mourning/customary, enemy/friend and permissible/avoidable, in kinship relations based on sex and the tribal etiquette.

Lexical comparison of cognates distinguishes basic factors of language change, in assimilation, dissimilation,

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[1] Kenneth Hale. Attestation in stems (middle Paman), Reconstruction. Unpublished MMS, 1961.

[2] Kenneth Hale. Vocabularies and Cognation Judgments for 30 Cape York Peninsula languages. Unpublished MMS, 1961.

reduction of clusters, loss of initial or final vowels, palatalisation, nasalisation.[1] The present inventory of Thaayorr morphemes provides the speech-flow which is subject to pressure from suprasegmental variables. Every culture exploits these in expressing the finer nuances of those lexemes.

6.4 The language type encountered

Thaayorr is a south(-west) Paman vernacular which has diverged from its neighbouring dialects. Results of the present study suggest similarities to other languages in Cape York, but the dialectal variation is considerable. Superficial comparison with the work of other linguists suggests that this tongue shares certain characteristics with some: e.g. five fully contrasting vowel qualities, phonemic length, elision of initial syllables, voiced fricatives and the glottal stop.[2]

The presence of only one lateral to match the full quota of obstruents and sonorants is noteworthy. Strong retroflexion has not been accompanied by the presence of the apicodomal stop and the nasal, as established phonemes. Fricatives likewise have the status of allophone. Restrictions on the distribution of phonemes reveal that /r̃/ and /n/ do not occur word-initially, and that the representation of /l/, /t/, /ñ/ and the vowels in that slot is weak.[3]

The relation between this language and its culture requires deep analysis of highly structured facets of life at Ed_ward River which have been observed, but imperfectly under-

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[1] These doubtless go on at a different pace because of differing conditions affecting each dialect.

[2] The five-way contrast in vowels may result from conditioning by contiguous consonants, or language influences from Papua.

[3] The rarity of /l-/ is also a feature in Iradig, Cape York.

stood. The hierarchy in phonological and morphological levels certainly recurs in the lexical and semantic areas where interrelations are patterned by the culture and kinship of the tribes.

Dialectal comparison of the morphology types could require a division between morphophonology and morphology proper. Morphological or phonological conditioning in the former probably occurs, at all times, each with its own definition and distribution. But morphology needs clarification of the inventory of morphemes and their distribution. Swadesh regards the interchange of phonemes in morphemes as a morphological process: e.g. leaf/leaves, cuff/cuffs, where two different f's are morphophonemes:

thus $f_1 : v = f_2 : f$. [1]

As voiced fricatives are not of phonemic status, they may be viewed as part of the Thaayorr morphophoneme, one of a class of like phonemes which are components of true morphemes. Their morphological function or affinity is similar within the mutation set. Unlike the phoneme, the morphophoneme may be symbolized by a distinctive orthography for the convenience of non-native speakers.

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[1] M.Swadesh. The phonemic principle. Language, 10 (1934), 117-29.

Length is definitive in this vernacular. Though lexically significant, acoustic duration in segments is extremely diverse for both phonetic and semantic reasons. Pitch differences manifest certain emic types of contour, just as phonological phrase stress may modify the normal morpheme-initial stress by a nuclear perturbation stemming from the rhythm of the whole utterance.

From the morphological viewpoint, Thaayorr is a suffixing language, though not devoid of prefixes.[1] While it bears the characteristic marks of Paman dialects, it can be compared satisfactorily, only when studies in depth become available. The phoneme inventories of these languages are probably similar, but distribution and alternation in cognates require closer investigation before the morphology is contrasted.[2]

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[1] See sections within 5.2.7.

[2] B. Alpher states that Koko Minjana consonant phonemes are the same as Ta:yoř, and notes certain changes occurring in the former: *-p to -w; *t/ty to -y; *t to -R; k to ʔ/Ø ; e.g. /paty/ to /pay/ 'rise'.

7.0 C O N C L U S I O N

Salient phonological features in the results of this study, confirm what has already been discovered by other linguists in the field.

7.1 Specific comments are listed herewith:-

(a) Thaayoř phonemes are typical of Paman languages, and closely related to other Aboriginal vernaculars. /k/, /p/ and /n/, /ŋ/, are the most common consonants; and /a/, /u/ and /i/ the most frequent vowels.

(b) The two-syllabled word contains a majority of the consonants, which include clusters formed from the nasal + stop (at the same point of articulation). /ln/ is frequent.

(c) The alveolar trill combines with the velar stop as the most common word-medial consonant sequence. Multi-consonantal clusters exploit the phonemes /r, n, j, k, p and r̃/.

(d) Vowel contrast is five-way for stressed syllables, but only three-way for unstressed.

(e) Vowel harmony tends to condition the vowels which occur in unstressed syllables, emic or transitional.

(f) The retroflexed continuant /r/, has a very strong conditioning effect on all vocoids and some consonants. It occurs alone, in sequences, as a syllabic and in any slot.

(g) Basic syllable structure is consonant-initial, and one or two consonants close most syllables.

(h) At least half the consonant phonemes may occur as nuclei to the syllable, which may have only one nuclear segment.

(i) /ŋa-/ and /ka-/ are the most common syllable onsets, but /ŋu-/ and /n̲u-/ are almost as frequent.

(j) The most common word patterns are CVC and CVCC in monosyllables, but in combinations of syllables, CV is also extremely frequent.

(k) Transitional vowels produce many CV syllables by using a vocoid which harmonises with the previous vocoid.

(l) The loss of initial consonants and syllable onsets is a characteristic of this language, giving fluidity of utterance.

(m) The nucleus of a phonological unit is usually marked by at least two of the usual suprasegmental variables.

(n) Pitch, loudness and length, together with voice quality, serve to give all modification of phrase and terminal contours.

(o) Medial intervocalic contoids tend to be in double function as coda of one syllable and onset of the following one, but the feature is a nonsignificant phonetic gemination.

(p) Intonational contouring distinguishes stative and interrogative patterns from those which are emphatic or emotionally loaded. Their terminals show contrast for conclusive, continuative, alternating and emphatic types.

(q) Stress-rhythm pervades Thaayorr utterances with patterning of accents and the number of syllables fitted into the regular time pulse which gives them phonological coherence.

(r) Phonological analysis by mechanical means is only an aid to auditory analysis (which is preferable.) The ultimate impression depends on psycholinguistic factors which the trained listener is well qualified to interpret. The consistent ratio of pitch fluctuation is maintained whatever the level of excitement in the speaker.

(s) Phonological contours are not only typically Aboriginal, but emic to each vernacular, varying from village to village, and even from person to person.

7.2 Pertinent grammatical features in the results of this analysis are partly typical of those in some other Paman languages. Some interesting ones are:

(1) Clauses are linked paratactically by a recurrent conjunction /ŋul/ which does not inevitably occur.

(2) Clause types tend to be transitive, intransitive, equational and compound without great distinction between dependent and independent, peripheral and nuclear.

(3) The preferred order of tagmemes is Subject + Modifier + Object (+ indirect object) + Verb.

(4) Subject and object pronouns frequently recur as bound morphemes suffixed to the verb; these reduced morphs usually lose the initial consonant and perhaps the vowel and a following consonant as well.

(5) Nouns and pronouns undergo a good deal of suffixation for 'case' distinction (except the objective). Suffixes conform to highly regular phone patterning.

(6) Verb morphology is ingenious and adequate to convey almost any combination of voice and mood except the passive transform. Tense and aspect in verbal phrases are well marked by signals conveying the necessary characteristics of verbal activity.

(7) Adverbs, directionals and demonstratives have their own kind of inflexion. The points of the compass and the orientation to (east-west) rivers are the basis of much emic pattern structure for direction, distance and motion.

(8) The sun, the foreshore and the moon are the criteria for indigenous estimation of time and tide. Comments on the changes in these three variables has led to the generation of a large number of expressions by which the Edward River inhabitant regulates his work, food-getting and leisure.

(9) Thaayorr oral tradition is marked by several features. Each word is restricted in function as one part of speech or another. Pauses do not correspond with those points where a linguist might put a grammatical fullstop. Rate of utterance varies from phrase to phrase and may slow to a drawled chant, or accelerate to an unintelligible torrent of words fused by the elision of initial syllables or consonants. Redundancy is countered by oratorical presentation of stories.

7.3 Lexical characteristics of Thaayorr depend on the segmental shape of the morphemes and the semantic grouping of the lexemes.

(i) This language is marked by the loss of final vowels in comparison with cognates in local dialects.

(ii) The number of words in the corpus of dimensionals and other adverbs is excessively large in spite of the accuracy of statement which is their virtue.

(iii) So too, the kinship terms, in comparison with English, for example, are especially numerous. But as this precision of differentiation has evolved within a complex culture over a very long period of time, the lexemes may be regarded as an efficient expression of complex kinship relationships. They are emic to the Aboriginal member of society, and as meaningful also from one clan to another as from one generation to the next.

(iv) Some languages differ lexically from their neighbours while retaining a similar morphology. Others in their evolutionary blending tend to do the opposite. This, for example, is said to be the relationship of Nuŋkupuyu at Rose River with the language on Groote Island. If Aboriginal man has been here for as long as he is reported to have been, then there has

been ample time for such changes to take place. This is particularly relevant to the difference between Thaayorr and some local dialects whose cognates show little correlation.

(v) Lexemes are remarkable for the number of multi-clusters of consonants which they include. This feature is accentuated by the phonetic loss of many vowels in unstressed syllables causing the reduction of two syllabled words of CVCVC shape to CVCC. Conversely, the number of transitional vowels reduces the number of consonants in sequence while increasing the phonetic syllables heard.

(vi) A phantom class of 'lexemes' parallels the normal vocabulary in so far as sensitive cultural concepts make the Aboriginal diffident in communication. This lexical set of alternatives comprises the 'secret words' used for ceremonial and mourning. They are the substitute lexemes when avoidance or prohibition compel an individual to forsake the usual term of reference. [1]

(vii) Especially interesting is the existence of the closed class of lexical markers whose members occur before so many of the nouns. Because of their preposed position, they tend to usurp the head-slot and the substantive functions virtually as an adjective or qualifier.

(viii) Compounds are more frequent than at first realised. Many words with a medial stress have proved to be compounds on later analysis of their structure. Usually, both morphemes

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[1] As with the crystalisation of original tongues within great religions, so old dialects may be retained for more mysterious parts of the culture. The Aboriginal man has stored up his mythology in language he may be able to recite but not understand, while his own vernacular diverges from the ancient model.

may occur independently. But when united, they fuse together and loss of the initial consonant in the second often conceals their border. So too, for long vowels other than in the first syllable of a word.

(ix) Loan words, suffixed by the morpheme, /rirk(-r)/, can be absorbed into the language with no hindrance whatsoever. Thus, any lexical gap is quickly filled to cope with modern requirements in terminology. An 'emicised' pronunciation occurs.[1]

(x) The concept of number is lexically inarticulate. Just as true counting beyond five is virtually impossible, so the distinction for number in the lexicon is lacking.

(xi) A composite lexicon tends to develop in a community where so many dialects exist side by side. But as the Thaayorr language has not yet commenced to break down, present lexemes are easily obtained. They are still essentially, Ta:yoř.

(xii) The lexical morphemes of Thaayorr form a continuum from which the native speaker constantly selects those favourable to the communication of his message. Aboriginal lexemes fall into classes, not only by their 'part-of-speech', but their emic class within the culture. Subdialects conform to the needs of each age-group, from the infant to the initiate, and from the young married man to the senior elder.

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[1] With the substitution of /j/ for sibilants and other phonological modifications and substitutions.

7.4 Miscellaneous conclusions

Because languages like those at Edward River are reported to be vanishing at the rate of ten each year, salvage is so much the more urgent.

In order to preserve the more virile vernaculars, like Thaayorr, literacy programmes are desirable. The extensive corpus of material could prove the basis for literacy primers to be used at Edward River. This would help to preserve a knowledge of the language while the older generation are still alive to communicate effectively to their progeny.

Aboriginal oral tradition is comparatively unknown. Some untrained collectors have succeeded in publishing some books of stories. Most linguists accumulate considerable materials of a literary nature in their corpus of field data. Publication of this material would be of great interest to present and future generations at Edward River. Their ability to read and write their own vernacular is desirable for integration of literate youths.

It is certain that very few Aboriginal languages will be spoken by the end of the century. The ones which are likely to survive will do so by the cultural virility of their speakers, the quality of the published story materials, the effectiveness of literacy and the adaptation of the tribal structure to a modern environment.

Evolution (or devolution) of Thaayorr has probably ceased with this generation. The fact that the Aboriginal is multilingual means that he easily embraces English and thereby potentially loses his own language. Continuity for Thaayorr depends largely on the spread of vernacular literature by some missionary body. English syllable patterns and new phonemes serve only to undermine emic structures in the vernacular.

Appendix A

Dialects represented at Edward River

An interim chart of languages, speakers, locality and land 'holding' appears below. Reference should be made to the numbers on plate (table) 1 in this thesis (page 15). Deceased speakers are marked with an x.

Dialect	Speakers	Locality and comments	Holding
Ta:yoř 1.	Jim Ta:yoř Edna's father[x] Conrad Charlie Jack Bruno Jimmy Foot Colemans Matt Jolly Miki Walker Ned Jo Rogers family Philip Tent Simeon Walker Edwards William Charlie Harry Charlie Polly's mother[x] Many others	South and east of the Mission which is now a mile or two north of the Chapman R. their old tribal area by the Julwota, 'the salt-water'. Joseph Pita was at /paluŋ-kan/ 'on N. bank' of the Melaman R. Polly's mother told the wallaby story, (Mantirtinm). Also 'Lightning' Story Ra:k ŋalin-t in'n-un-t 'This our home'	Battersea (Belper)
Kirka 2. ??	Edi Charlie Harry Charlie Polly's (and her brother, Bob's story) David Apyuw	South side of Chapman R. at /Palipan/ 'on S. side' "Spear" story only ?? (Polly's elder brother)	Battersea
Matn 3.	Clem Charlie Jim Kendall Jarm and Jerry Ned Top-end folk Stan Monday	Pormpur-ra:w at Edward R. Chapman R. Top-end folk /pam kaw-um/ 'from East Coen, side'. Up N.W. Tributary of Chapman R.	Battersea

Dialect	Speakers	Locality and comments	Holding
Tayem 4.	Teddy Rogers Joseph Pita Jim Ta:yoř Ned Jack Bruno	Taŋknit kuñjnam Melaman R. Delta (North side). /Poketan/ delta-mouth area near the beach. At Jilako	Chillagoe Pocket
Yak 5. (Jagh)	Maudie Rubi Benjamin Edna's father[x] Miki Edwards Brian[x] Mayk Edwards[x] Walker Edwds Simeon Pantha Coleman Matt Jolly Miki Walker Ned Jo	/Nat kor yumpan/ 'Station Creek; Topend people. Palipan Riř'ant; Miki born at Bamboo Spear, at /Ra:k kurŋu/ Other home at Melaman and Chapman, at Taŋknit. Ra:k Put]but]	Congleton Cottesloe
Tayunt 6. (Dayund)	Pantha Coleman Wallaby Charlie family Frank Clem Charlie Edi Coleman Vincent C.	Near Chapman River, at Penkel-tan(-am) /Palipan), 'South side of river'. Riř'ant on Chapman R., home of Colemans and Charlies together. Yi'an : Polly Brian and Mamona's mother.[x] /Palipan int/ 'South bank' From W. to coast about 10m. Yi'an from Tomi Brian's clan.	Coleman Pocket
Ta:non 7. (Minjana) YirYiront	Beatrice Ephraim (Alice) Jim Ta:yoř Nora " Layna Edna's mother[x] Joseph Pita	Melaman R.; Taŋknit Kuñjnan (Joined Mr Chapman[x] c.1932) /Palipan/ 'S. bank of the Melaman R.; Between Jilako and Melaman; (Koko Munjan) J. Pita/Paluŋkan/ 'N. bank' Ra:k Melem-an (near beach)	Chillagoe Pocket Coleridge

Dialect	Speakers	Locality and comments	Holding
Muŋgañ 8. (Wik) Muŋkañ	Jo Holroyd and Maymona (by marriage here) Jim Kendall Holroyd family Norman H's dad[x] Tomi and Polly Joseph Poppy Stan Monday Geo. Lowdown Simeon Mini Monday Patrick Moses	Wa:laŋ at Christmas Creek Maymona was from King R. and spoke Winjinumuŋ (Ku:k) at Holroyd R. Topend folk Polly's father[x] from here /Dampa kana iyamu/ 'You and I go now'	Holroyd Dormer Hersey Coleridge
Maŋka 9.	Stingray Jim Kendall Sandy Holroyd Patrick Moses Geo Lowdown Kitty Mosquito	Manrupa; Muŋkan Creek about 5 miles north of present Mission area. Ti:j ~ Diji /Paluŋkan/ 'on N. side' Edward R. Hersey Creek Also Polly's grandmother[x] wa'awa. (Elizabeth's parents)	Crawshaw Colville
Mumin 10. (Mu'in) (cf. Wik Yi'an Ye'an)	Apia Pita Silia Pita Topsy Gordon Polly Geo Edwards Jo Holroyd Tom Howard Polly's father[x] Pita Holroyd Duncan Kathleen Cecilia Betty Moonlite David Avua	(a) Up Holroyd R., inland /Agu ŋakayaŋka/ (small river with abundant supply of fish) Wa'awa and Ta:w-kuŋata "Stingray" story Tupiyomolo = Polly's Bush-name, from her father. Same as Wik Want eña ?? (at Aurukun) (b) Wik Iyan; Toby, Theresa, Georgina, Jimmy Kendall.	Brooks Bathwick (3, 4)
Pakan (mu:ŋk 'eat') 11.	Jerry Ned and brother Germ Polly Brian Jenny Kendall Jum	South of Deep Lagoon Taŋanyañga (Jerry Germborn) Strathgordon Station Muŋkan from mother, Mini Ned	Cottesloe

Dialect	Speakers	Locality and comments	Holding
Olkolo 12. (kunkin) (cf. Koko Munjin)	Germ Ned Coen People Elizabeth Pany Emily Rita Roger Audrey Flora Bruno (M.R.M.) Lily Raymond (M.R.M.) Edna's mother[x]	Up Coleman R. and down to Mitchell R. Mission, Dunbah and Klara. North side Surprise, Bull Yard, Clay Hole, Alice R. Kunjin Dick and Greenwool at Mitchell R. Mission Bull's Yard to Konunyuma to Jilako Runaway Yard /Kowenpiñil/	Coleman
Dantyaña (Danjera) 13.	Simeon Patrick Moses	Manrupa Muŋkan Creek	
Winji- numuŋ (Gugu) ?? 14.	Maymona Jo Holroyd's mother Frank Holroyd	King River near beach (W.) Tributary of the Holroyd R. Now living at Palm Island after killing Aurukun man	Coleridge
Mu'in 15. Min	George Lowdown Stingray Peter Tomi Brian Jam	Christmas Creek (Monty West collected this)	Hersey Crawshaw
Ye'an Yi'an 16.	'Turtle story' Pita Brian Tomi Brian Tom Holroyd Mamona's mother and father	Between Christmas Creek and the Holroyd R. Big fresh-water swamp with no bark, no trees, only grass for making humpies *	Hersey Holroyd
U:wan 17.	Maymona Polly's father	King R. near Holroyd R. Ra:k Nokyaŋkar Dakta:w-kuŋata, * Home: Tagunatha	

Dialect	Speakers	Locality and comments	Holding
Dawandjil Tawantyin Tajiñi añ	Patrick Moses and clan Polly's grand-mother	Muŋkañ Creek	Battersea
Poro (Boro) 1	Conrad King Charlie Pugh Roger William Charlie Jerry Norman	Koko Nomanik 'Duck' story Edward R. in wild time Top-end people	Colville Congleton
Puntil 1 (Bundil) 'brolga'	Jim Foot Tom Foot Patrick Foot (Bat But) Lawrence Foot	Edward River Top-end (wild-time) Eltyi 'Brolga' story NOT dialect ??	Colville Congleton
Puŋku Patpa 1	Germ Ned Jerry Ned	(Bush-name?) Ototomboyen 'Dead body" story	
Min Tatpar 1	Polly's mother[x]	Their totem of the goanna Thaayoñ-et 'It's in Th.'	
Gugu Matu 1	Polly's father[x]	Min Tatye 'Goanna' story	

1 It is most likely that these are stories only and not dialects. Each particular patri-group had its own totem-stories. The amount of language retained by the speakers mentioned and also some others, varies in quantity and quality. The exact number of speakers in each of the numbered dialects is not yet known.

Appendix B

Lamalama comparison[1]

The following short list was obtained from a woman aged about 40 years, at Coen reserve. This informant, Jenny Thompson, was a good informant.[2]

LAMALAMA	ENGLISH	THAAYORR
(w)uŋku	water	ŋok
lun	sun	pu:ŋ
tapulun	star	me:r-pork
aña̱r hanmai	big girl	pa:nt pork, ŋamal
aña̱r	(small) girl	paña̱'r pa:nt (me:nmña̱)
aña̱nam	finger	yu:r mant
wu:ta	nose	ko:w
lambari	earlobe	ka:l tam(u)r
tun	tree	yuk
tun hanmai	big tree	yuk pork, ŋamal
olman nomla	old man sleeps	pam tu:mp wut wun
lun shainomla	the sun shines	pu:ŋ pa:pat
makañe	'I see the boy'	ŋay paña̱'r na:w-r
makan karen	you see the girl	Nunt paña̱'r pa:nt nak
mbeña̱ haŋan	he chased him	nul wak-m-un
teña̱amla	cut down the tree	yuk rat-r-ul
mbaltu	foot	tam(u)r
awaña̱	one	tono
thwaña̱	two	kutiña̱
awaña̱	three	pinalam
pyaña̱o	five (= 1 hand)	yu:r tono

[1] Languages at Coen include Lamalama dialects, Muŋkan dialects, Kantyu, (Umbil) and Ulkulu.

[2] Her old mother, Possum, aged about 75 years, spoke another dialect, but was not questioned or recorded.

hare	grass	waña<u>t</u>
aña'kulal	moon	kapir
yal	small boy	paŀr mantam
hanmai	big	ŋamal, pork
lamtu	hand	yu:r
kul	arm	pu<u>nt</u>
añatan	eye	me:r
añapanapal	hair of beard	<u>t</u>erpñ pañjir
syan nomla	she sleeps	<u>n</u>ul wut
mam hanmai	the house is big	pormpr ŋamal-<u>t</u>
hare syatumla	the grass grows	waña<u>t</u> kunk
añar makañe	I see the girl	pa:<u>nt</u> <u>n</u>a:wr
hrue makañe	I see the wallaby	mi<u>n</u> ko<u>t</u>on <u>n</u>a:w-r-ay
tuañ beñ haŋan	he chased the dingo	kuta wak-iñ-ul
ta	leg	yaŋkar
añpan	head	pa:nt
syan syatan añat	she awakes	<u>n</u>ul pinañ
syatan le	she gets up now	<u>n</u>ul yo:ñ <u>t</u>an, rirp
tun nom makal		
tun makan nom	there is a snake	yak i: wu:n
ñim laŋum	he kills the snake	yak <u>t</u>e:rŋ-añ-ul
faye warin me	I cook that snake	yak i<u>n</u>' ŋay rint-r
lilapal	we eat it now	mu:ŋkañ-amp
makaye	I	ŋay
tui	you	<u>n</u>unt
lui	he	<u>n</u>ul
makal	she	<u>n</u>ul
thoañ	you, we, they two	<u>n</u>ip, ŋal, ŋali, pul

awař	we all	ŋamp
peřo	you all	nuř
pyeřo kařul	they all	peln
makan ye	I see you	May nin na:w-r
makal tui	can you see the boy?	Nunt wu:mp pař'r na:wr
mbati	no	pokon
teta	yes	ŋawoy
tařalte	I walk, go	May yan
ařa shana kařalta	I shall go	May yup yan
palapal	fish	ŋat
hrui	bird	min mantmant
hrui lor	flies high	rirk palkan
ñe lim	the dog is eating	kutaku may mu:ŋk
karl manam	'the girl laughs'	pař'r pa:nt ta:ŋkar
ndavař haŋan	'I wash in water'	May miñj-mu:nt
syan nom	two sleep	wut wun pul
makal	look	nak, na:w-r
nela	what's this ?	Int ŋan ?
ndaŋo		
ařŋgil	tobacco	yuk
mam	house	pormpr
hayihal	humpy, shack	pormpr
pelpen	short (finger)	kon
ařeta	teeth	ki:n
hřal	I stand	ŋay tan
ñel	I sit down	Ni:n ŋay

No correlation between the dialect of Lamalama and Thaayorr has emerged from this list, but it is included for salvage.[1]

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[1] Unfortunately, no further opportunity has occurred to allow the above list to be confirmed or expanded.

Appendix C

Cognates in Edward River related languages

A random pilot-list of 49 words was translated into most of the dialects encountered at Edward River.

English	man	tree	creature	boomerang	house	fish	spear
Ta:yoř	pam	yuk	min	werŋr	pormpr	ŋat	kirk
Secret	pi:m	yu:ñj	naŋki	min pu:nt yuñj kumn	ŋořkn	wonp	rij
Kirka	pam	yatr	min	werŋr	pormpr	ŋat	kirk
Matn	pama	yuku	mina	we:ŋa wiñjn	tawunu	ŋa'a	keka
Tayem	pam	yuk	min	werŋl	pormpr	ŋa:t	kirk
Yak	pam	yuk	min	werŋr werŋl	ŋorŋkr	ŋat	kalk
Tayunt	pam	yuk	min	werŋr	pormpr	ŋart	kirk
Ta:non	pam	yo'o	min	wern	ŋorlt	ŋart	kal'
Minjana (Secret)	pi:m	yul	na?	yulkumn	mu:rl	ye:per	liñj
Muŋgañ	pama	yuku	mina	we:ŋa	tawun	ŋa'a	keka
Muŋkañ	pama	yuku	mina	wiñji	tawun	ŋa'a	keka
Maŋka	pama	yuku	mina	we:ŋa	tawun	ŋa'a	keka
Mumin	pama	yuku	mina	we:ŋa	tawun	mina	keka
Pakn	(pama) pi:m	yuku yu:ñja	mina	wiñji	wapaŋ tawun	ŋa'a wonpo	keka ŋoneřa

English	carry	here	thigh	smell	living	hand	raincloud
Ta:yoř	kal	naka	kumn	kuŋun	kunk	yu:r	kormn
Secret	ko:tnan	kaman	ka:pun	in'waŋl ko:rirk	yakl	waŋl	kormn
Kirka	kal	naka naknaku	kumn	kuŋun	kunk	yu:r	makařı [stʊyʊ]
Matn	kala	iŋun	kumun	awala	yeta	ma'a	ŋaka
Tayem	kal	naka	kumn	kuŋun	kunk	yu:r	yinp
Yak	kal-al	ŋeŋkř inikan	kumn	kotaŋkn kuŋun	yet kunkař	yu:r	yi:np
Tayunt	kala	nakunaku	kumun	ŋurk	kunk	yu:r	makařı kormn
Ta:non	ŋayeml	no'	kumn	ŋultř	kun'	yo:r	yiřp
Minjana (secret)	alařma	lařolt	ka:pun	nin	ya'al	waŋl	yiřp
Muŋgañ	kala	iŋun	kuman	awal	yeta	ma'a	ŋaka
Muŋkañ	kala	in:u	kuman	awala	yeta	ma'a	ŋaka
Maŋka	kala	iŋun	kuman	awala	yetala	ma'a	ŋaka
Mumin	kala	iŋun	kuman	awala	yetala	ma'a	yu:wa
Pakn	kala ko:toŋa	iŋun	ka:pan	awala	yeta	ma'a polom	ukulu uñul

English	white cloud	eye	good	tail	eat	see	child
Ta:yoř	korirkr	me:r	min	mul	mu:ŋk	na:m	pař'r
Secret	k. kan manr rerkr	ko-yapim	kan pem te:y	ŋañj mul	ŋuj	yaŋknuñj	ma:t
Kirka	riřkr	tu:tu	min	mul	mu:ŋk	na:m	pař'r
Matn		mę:	mini	mulu	mu:ŋka	tato	pukwi
Tayem		me:r	min	kuñj	mu:ŋk	na:m	pukřim
Yak	ŋulpup yinpŋul	me:l(ijř) me:r	min	mul	tej ku'u term	na:m	pař'rl
Tayunt	tuyu korirkr	me:r	min	mu:l	mu:ŋk	na:m	pař'r
Ta:non	yiřp ŋorl	me:l	ŋeřyap	kunkolt	oto apay	akiři nuŋun	leřen
Secret	ŋo:l	yapm	tey	kunkolt	amal mon	yanilt	ma:y
Muŋgañ	yuwa	me:	wanti	mulu	muŋga	tato	pukwe
Muŋkañ	yaŋku	me:'e	wanti	mutu	kuŋka	tato	pukwe
Maŋka	ŋulu	me:	wanti	mulu	muŋga	nda:	bup:we
Mumin	ŋulaŋka	tanta	mini	kulu	kuŋga	na:wa	bup:we
Pakn	yaŋku	me: ya:mpañ	wanti te:ye	mutu muyu	paka ŋuja	na:wa im(ŋ)ali	ta:pi

English	sit	boat	he	I	you	you-I	we-2-exc
Ta:yoř	ni:n	tawat	nul	ŋay	nunt	ŋal	ŋali
Secret	kaman ŋaŋku ma:k	ŋañj korerkr	nul	ŋay (kanpem)	nunt	ŋal	ŋali
Kirka	ni:n	tawat ka:lurmp	nul	ŋay	nunt	ŋal	ŋali
Matn	ni:na	pu:tu	nila	ŋaya	ninta	ŋali	ŋali
Tayem	ni:n	pu:tn	nul	ŋay	nunt	ŋal	ŋali
Yak	ni:n	ka:lmp	nul	ŋay	nunt	ŋal	ŋali
Tayunt	ni:n	kowurt kawata	nul	ŋay	nunt	ŋal	ŋali
Ta:non	a:nin	pinař	nolo	ŋoyo	orto	ŋele	ŋelen
Secret	alařolt	ŋalŋol	nolo	ŋoyo	orto	ŋele	ŋelen
Muŋgañ	ni:na	pu:tu	nila	ŋaya	ninta	ŋale	ŋale ŋana
Muŋkañ	ni:na	pu:tu	nila	ŋaya	ninta	ŋale	ŋale ŋana
Maŋka	ni:na	pu:rtu	nila	ŋaya	ninta	ŋale	ŋana
Mumin	ni:na	pu:rtu	nila	ŋaya	ninta	ŋal$^{i}_{e}$	ŋana
Pakn	ŋaŋku ŋa:nbumu mu-mak	pu:tu	nila	ŋaya	ninta	ŋali	ŋana

English	water	skin	sun	moon	place	foot	mouth
Ta:yoř	ŋok	petn	pu:ŋ	kapir	ra:k	tamur	ta:w
Secret	(ma:nutn) man ŋujin	petn	kiŋkja (kanpem) ra:k ma:kiř	yuñj we:tum	ŋankum	mo:k	ta:nt
Kirka	ŋok	petn	pu:ŋ	kapir	ra:k	tamr	ta:w
Matn	ŋaka	aku	pu:ŋa	kapi	agu	ta'o	ta:
Tayem	ŋek	petn	ŋa:ř	kapir	ra:k	tamr	ta:w
Yak	ŋak ŋek	petn punt	ŋa:ř	kapir	ra:k(ř)	ta:mul	ta:w
Tayunt	ŋok	petn	pu:ŋ	kapir	ra:k	tamur	ta:w
Ta:non	kawun	pertn	pu:ŋ	ka'ar	la:ř	taml	ta:w
Secret	man kuřyur	muřkana	la:ř tumtum	ka'ar	nan'm	lařman	ta:w
Muŋgañ	ukulu	aku'	puŋa	kapi'	a:gu	ta'u	ta:'a
Muŋkañ	ukulu	aku'	puŋa	kapi	a:ku	ta'u	ta:'a
Maŋka	ŋaka	aku'	pu:ŋa	kapi	agu	ta'o	ta:
Mumin	ŋaka	aku'	buŋa	kapi	agu	ta'o	ta:
Pakn	uñul	aku pe'n	kampala	o:to	ŋa:nkum	umiñ mo:ko	ta:ntu

English	woomera	fall	where	is it?	dig	nothing	lie down
Ta:yoř	tul	wontr	wantan	wu:mp	raw	pokon	wu:n
Secret	yunjgoyr tant	ka:kl weneyr	yu:w ra:k ma:kiř	yaŋkn-unjař	ya:rmp	wimuŋkon wimukon	kaman
Kirka	tul	wontr	wantan	wu:mp	raw	pokoř	wu:ř
Matn	tuli	anje	wantu	epa	wa'e	ya'a	wu:na
Tayem	tul		wantan	wu:mp	raw		wu:n
Yak	tul	ta:řkrn	wantan	wu:mp	raw wat	pokmř-en	wunun
Tayunt	tul	wuntr	warntan	wu:mp	raw	pokon	wu:n
Ta:non	to:l	atolt	wa:řel	wu:w	akwuř	ma:puwl	awin
Secret	ko:kuřyuř	alařolt	wa:řel	wu:w	akwuř	wimuwl	alařolt
Muŋgañ	tuli	ke:ge	warntu	epa	wa'i	ya'a	wu:na
Muŋkañ	tuli	ke:ke	wantu	epa	wa'i	ya'a	wu:namu
Maŋka	tuli	añje	wantu	epa	wa'i	ya'a	wu:na
Mumin	tuli	añje	wantu	epa	wa'i	ya'a	wu:na
Pakn	tanti	makañ ke:ke	wantu	epa yu:nja	wa'i	wimugu	wu:na(mu)

English	put	chop	hair (head)	speak	soon	afraid	blood
Ta:yoř	wunp	yak	yaŋn	yik	yup	wenet	kam
Secret	ŋenm	ya:dpaŋ	tiwtiw	yiŋkum	waymn	wi:pn ra:k ma:kiř	ŋo:lpuŋ
Kirka	wunp	yak-ř	tewtew (feather)	yik	yup	wenet	kam
Matn	wunpa	umpin	yeŋan	tawa	yupa	wini	kam
Tayem	tarl	yak	yaŋn	yik	yup	wi:nu	kam
Yak	nit wunp	yak	yaŋn	yik	yup	wi:n ya:mpn	kam
Tayunt	wunp	yak	yaŋn	yik	yup	wenet	kařpm
Ta:non	atař	(ŋ)aye(ŋ)	par tořjn	ayiř	po:yn	wenuw	kam
Secret	awadlon	(ŋ)aye(ŋ)	ŋeřjer	ayiwan	ŋa-wal	wenuw	wiř'eyu
Muŋgañ	wunpa	umpi	yeŋan	ta:wa	yupa	wini	kamu
Muŋkañ	wunpa	umpi	yeŋan	ta:wa	yupa	wiña	kamu
Maŋka	wunpa	umpi	yeŋan	ta:wa	yupa	wini	kamu
Mumiñ	wunpa	umpi	yeŋan	ta:wa	yupa	wini	kamu
Pakn	wunpa	ku:ni yaka	yaŋn	ta:wa	yupa	wiña	ŋolpoŋ

Informants:

Ta:yoř - many; Secret - Jim Ta:yoř; Kirka - Harry Charlie; Matn - William Charlie; Tayem - Jim Ta:yoř; Yak - Mayk Edwards; Tayunt - Edi Coleman; ta:non - Jim Ta:yoř; Minjana-Secret - Jim Ta:yoř; Muŋgañ - Jo Holroyd; Muŋkañ - Stan Monday; Maŋka - Stingray, Kitty; Mumiñ - Polly, Abia, Silia; Pakn - Jerry Ned.

Appendix D

Literacy elements

Basic elements, selected according to their frequency of occurrence in the language, appear in graded steps which may be followed if a literacy campaign should be envisaged for the benefit of Edward River inhabitants.

Step I

Consonants	k	n	
Vowel	a		
Sequence	ka-		
Words	ka 'missed'	kan 'on top'	nak 'see'
	kana 'all right, go on'		a' what's that!'
			naka 'here'

Step II

Consonants	ŋ	p	l
Vowels	u	i	
Sequences	ln	np	ŋk
	ŋa-	ŋu-	pa-
Words	ŋa 'listen'		
	ŋul 'later'	lup 'in'	pul 'they-two'
	ulp 'that'	ŋal 'we-two'	kanpa 'first'

Step III

Consonants	n	r	
Vowels	a:	e	
Sequences	lp	rk	nr
	kr	nn	kn
	nu-	na-	pu-
Words	ŋe 'what's that!'	ke 'my word'	le 'next'
	nul 'he'	nun 'him'	no:ŋ 'move'
	nin 'you'	ka:r 'not'	nan 'sand'
CVCC	kirk 'spear'	ŋurp 'lily-root'	ruŋk 'goanna'
	peln 'they'	kerp 'finish'	rirp 'emerge'

CVCCC words nerŋk 'son' perŋk 'rifle fish'
Other rirk-r 'get up, rise' (and many more)

Step IV

Consonants t ř m
Vowel o
Sequences mp nt lt km řk tn
Words it 'that' iř 'oh!' int 'this'
Sequences ta- li- ku-
Words mi 'oh dear!' ti: 'tea' ŋo 'look out!'
CVC words piř 'snatch' tut 'pluck' na:t 'saw'
ra:t 'chop' ju:t 'sulky' pam 'man'
kam 'blood' pař 'extract' til 'again'
moŋ 'many' ŋit 'that' min 'good'
nuř 'you' kum 'not see' ma:k 'press down'
rat 'seed' tak 'leave' tip 'liver'
top 'hunter' kon 'short' tap 'fork (tree)'
CVCC words kamp 'tracks' moln 'ants' namp 'name'
toŋk 'come' rerm 'flat saltpan' nult 'he!'
nuř-t 'you!' ŋant 'me!' puřp 'grab'
ka:nt 'scratch' minŋ 'fear' rint 'squeeze'
CVCCC (ŋ)int-p 'this again' pelnt 'It's them'
ŋampt 'It's us' kulnt 'the possum'
turmp 'stick' pirmp 'float'
ŋulp-t 'it's that one' ŋamplin 'ours'
melnkelnkař 'tomorrow'

Step V

Consonants y w
Vowels i: u:
Sequences rp tn řp nt ln tj lnt
Words i:p 'it's mine!' i: 'there' ŋi: 'there'

Sequences	ma- wa- ya-		
Words	wo 'hunt (there)'	ki: 'look out!'	
	yi: 'oh dear!'	liŋ 'torch beam'	
CVC words	yu:w 'far away'	yuk 'tree'	yup 'soon'
	wu:j 'song'	pu:ř 'place down'	yen 'open'
	wal 'basket'	waŋ 'whiteman'	yal 'creek'
	yik 'say'	kiy 'missed!'	koy 'sing out'
	wak 'chase'	wun 'lie down'	ya:ř 'walk'
	wut 'sleep'	may 'food'	raw 'burnt'
CVCC words	wu:tp 'stormbird'	ŋamp 'we'	kump 'angry'
	mant 'small'	tañn 'solid, hard'	terp 'fast'
	yu:wp 'away'	yaŋk 'dine out'	mu:ŋk 'eat'
	wonp 'die'		
CVCCC	terŋk 'catfish'	termp 'salty'	
	tirmp 'salmon fish'	pi:rnt 'horse fly!'	
	yarmp 'cut'		
Others	yu:mp-nan 'will do, make'	ŋurnturntuř 'by night'	

Step VI

Consonants	t j		
Vowel	e:		
Clusters	tn nt lr wr ñj tp	na- mi- pe-	
Words	e: 'oh yes'	ŋe: 'yes'	ju 'shoo!'
	ji 'here, boy!'	ye: 'oh yes'	ja 'shut up!'
CVC words	ŋe:m 'listen'	tep 'silence'	jiř 'out'
	wa:t 'mistake'	re:k 'give'	paj 'get angry'
	ŋa:j 'full'		
CCC clusters	rmp rnt rkr rnt lpt lnk		
CVCC words	ŋe:ŋk 'stomach'	petn 'skin'	ne:mp 'gallah'
	rint 'cook'	pa:nt 'head'	ŋotn 'black'
	we:nt 'silly'	ri:nj 'cramp, get poor'	
	nu:mp 'wipe'	kutj 'go out'	patp 'camp'

	ri:tj 'run'	
CVCCC	kornt 'black flying fox'	tirnt 'beefwood tree'
	petnt 'the skin'	ye:rmp 'flutter'
	ŋ-int-l 'this (erg)'	
Others	te:rkr 'returned'	toŋk-r 'came'

Step VII

Consonants	ñ	'			
Vowel	o:				
Clusters	rm	nn	ra:-	ti-	ri-
Words	in'n 'here'			in' 'this'	
	'i 'whew!'			ko: 'I forgot'	
CCC clusters	rŋk	ñjn	ñjŋ	n'n	ř'r
CVC words	yo:ř 'now'		wo:k 'leaning'	ko:p 'all'	
	ŋo:p 'dog-tick'		ra:k 'earth, time, place'		
	ro:k 'enter'		ru:k 'scrape'		
CVCC words	to:mp 'smoke'		ka:rt 'don't want to'		
	maŋk 'low'		miñj 'very'	yo:řp 'inverted'	
	puñj 'stay, reside'			yo:ŋk 'suspend'	
CVCCC	po:rmp 'tip out, pour'			werŋk 'peep'	
Others	ŋañjn 'we (exc)'			in'n-ŋun 'to here'	
	pař'r 'boy, child'			miñjŋul 'evening'	

Step VIII

Common CCC-clusters are able to be taught:

	řtp	mpl	mpn	ntl	ŋkr	mpr	ŋkn	rkn
CCCC								
	rmpr		ñjnt		řŋkn			
CV								
	ko-		-řa-		ta-			

Vocabulary:

Selective use of the lexicon will enable many different utterances to be assembled for 'new-literates'.

Appendix E

Para-punch card analysis

With the view to quicker sorting of data by digital means, an attempt was made to devise an adequate programme card of the para-punch type.[1]

The phonological clearly required separate treatment from the morphological/syntactic aspects. Therefore, a new programme card was worked out, using the small-sized cards.[2] This facilitates sorting of greater depth in a restricted field and allows wider representation within categories. Cards with holes numbered consecutively from 1 - 76 are preferable to other cards which may be provided unless the research linguist states his preference.[3]

Para-punch cards should not be overloaded with stored data which is redundant or not likely to be used or extracted. Only operable information should be encoded, for much processing can quite easily be done directly by hand-written insertion into known subsections. Statistical frequency is better treated by computer and therefore only a fraction of possible information needs encoding according to the (economically) reduced programme.

The following categories were selected:

---

[1] Wilfred Douglas supplied his programme card for phonological/syntactic sorting.

[2] Lamson Paragon Limited, Parapunch 151-52, SW 16346 at Twelve dollars seventy cents a thousand cards.

[3] For ease of handling from programme reference card and for economy of time.

Holes	Categories	List	Values
1 - 4	Parts of speech	A	8-4-2-1
5 - 8	Case	B	8-4-2-1
9	Comparison	Direct punching	
10	Bound (dependent)	"	"
11	Directives (To)	"	"
12	" (From)	"	"
13	Locality (At)	"	"
14	Time (temporal)	"	"
15	Reduplication	"	"
16	Interrogative	"	"
17 - 20	Dialectal identity	C	8-4-2-1
21 - 24	Allomorphs	D	"
25 - 29	Lexical markers	E	16-8-4-2-1
30 - 34	Verb suffixes	F	"
35 - 38	Affixation of non-verbs	G	8-4-2-1
39 - 43	First phone of vernacular	H	16-8-4-2-1
44 - 48	Second " " "		"
49 - 53	Third " " "		"
54 - 58	Fourth " " "		"
59 - 64	S p a r e s	J	6 holes
65 - 68	First syllable of CV-pattern	K	8-4-2-1
69 - 72	Second " " "		"
73 - 76	Third " " "		"

These categories, when condensed thus into their 'fields', may be supplemented by some direct punching, allowing spares for later additions. This exhausts the card's storage capacity for this particular programme. If some of the categories were not required, others could easily be substituted, noting that hole-values 8-4-2-1 give a potential storage for 15 categories per field of 4 holes. For a longer list, 16-8-4-2-1 gives 31 categories per 5-hole field.

The technique of using para-punch cards depends on the specific aim of the linguist when sorting different kinds of material. Using the above fields for encoding, it is probably advisable to type one or more clauses or sentences on each card, limiting the amount to a maximal number of encodable features. Thus everything will be encoded without overloading the card or rendering some fields redundant.[1]

To use the larger sized card would immediately raise initial costs, and it would therefore be better to reduce categories desirable for digital sorting, concentrating on essential ones. Others of low functional load could be avoided.[2]

CODE - LISTS for para-punch-card analysis

List	Category	Number	Code
A	Parts of speech	1	Proper noun
		2	Common noun
		3	Descriptive - Adjective
		4	Quantitative "
		5	Numeric "
		6	Distributive "
		7	Conjunction
		8	Interjection
		9	Pronoun
		10	Demonstrative
		11	Adverb - dimension
		12	" manner
		13	" reason
		14	etc
		15	
B	Case	1	Nominative - subject
		2	Vocative (- kinship)
		3	Accusative - object
		4	Genitive - possession
		5	Dative - indir. obj.
		6	Benefactive

[1] Only one utterance per card would be unnecessarily expensive.

[2] This would also release more holes for multiple fields.

List	Category	Number	Code
		7	Ablative
		8	Instrumental
		9	Ergative
		10	(Elative)
		11	(Allative)
		12	(Locative)
		13	(Indirect Object)
		14	etc
		15	
C	Dialects	1	Language A
		2	B
	(Probably	3	C
		4	D
	non-	.	.
		.	.
	pertinent)	15	N
D	Allomorphs	1 - 15	for most common morphs
E	Lexical markers	1	pam 'male'
		2	may 'foods'
	(Pertinent	3	min 'animal, bird'
		4	ŋok 'liquids'
	for	5	ru:r̃ 'insects'
		6	yak 'snake'
	Thaayorr)	7	yuk 'tree'
		8	ŋan 'kinship'
		9	etc
		.	
		31	
F	Verb suffixation	1 - 31	Specific suffix inventory
G	Non-verb suffixation	1 - 31	" " "
H	Vernacular alphabet-isation	1 - 31	Four fields each of 16-8-4-2-1, to encode first four phones.
J	S p a r e	Extra fields where needed	
K	C-V Patterns	1 - 15	Basic syllable types

Alternative list of categories

In order to select only the categories which one requires for a specific language or dialect, with selective discrimination, the following might be considered:

1	Utterances	Non-clausal
2		Simple
3		String
4		Group
5	Sentences	Non-clausal
6		Simple
7		Complex
8		Compound
9	Clauses single	Quotation
10		Question
11		Statement
12		Greetings
13		Responses
14		Exclamation
15	Sub-clauses	Phrases
16	Clauses	Multiple
17	Phrases	(1 - 31)
18	Active	
19	Passive	
20	Nominal focus	
21	Verbal focus	
22	Independent - main	Transitive
23		Intransitive
24		Equational
25		Action only (Intrans)
26		Object-actor (Trans)
27	Subordinate clauses	
28		Adjectival
29		Relative
30		Noun
31		Conditional
32		Manner
33		Time
34		Location
35		Reason
36		Concession
37	Non-subordinate	
38	Noun-nominal	
39	Verb-al	
40	Descriptive	
41	Modifiers	
42	Conjunctions	
43	Subject	
44	Object	
45	Action	
46	Subject-action	
47	Subject-object-action	
48	Equational	
49	Action only	
50	Object-action only	
51	Ditransitive	
53	Moods (Code 1 - 3)	
54	Sentences (Code 1 - 31)	
55	Tagmemes (Code 1 - 31)	
56	Voice (Code 4-2-1 = 7)	
57	Aspect (Code 1 - 15)	
58	Relator-axis	
59	Clitic	
60	Centered	
61	Double-centered	
62	Non-centered	
63	Single-centered	
64	Dialects (8-4-2-1 or 15)	
65	Discourse	
66	Co-occurrence	
67	Coordinate construction	
68	Exocentric construction	
69	Gerunds	
70	Idiom nesting (embedding)	
71	Intonation	
72	Participial	
73	Clauses (alternative code)	
74	Selected parts of speech	
75	etc	
76	depending on the term-	
77	inology of the linguistic	
78	School preferred.	
79		
80		

These categories are essentially etic, and are intended to assist in the finding of emic patterning.

Appendix F

Informants and useful contacts

Aidan Melaman Brother of Charlie, good knowledge of English; rather prefers outdoor to informant work.

Alice Ephraim Wife of Ephraim, capable, helpful, good at translating, knows several Mitchell dialects well.

Bertie and Edie Williams Caretakers of Opal house in Cairns, helpful in accommodating informants, meals, interviews; resident in Nellie Street, good-living Aboriginal couple.

Bob Roberts Muŋkan boy from Edward River, excellent English, speaks Muŋkan and Thaayorr, working at Atherton, helpful informant for Aurukun linguists.

Charlie Melaman Helpful young informant, went with brothers to Palm Island during their sentence, good English.

Clive Edward Not used, but reported to be at Glenobah Station outside Normanton, potential informant with brother, Kalu.

Daisy Daphne House-wife and willing informant, wife of Edi Coleman, at Edward River.

Daniel Slow speaker of English, but willing to help at his own pace when no one else is available.

Donald William Average informant, works away from home at Cattle Stations; useful when willing.

Eddie Coleman Willing bright personality, good on stories and legends; worked well with Mayk Edwards on Kuuk Yak and Thaayorr comparison; vivid and dramatic in stories, but less facility in English.

Edna Charlie Young wife of Clem Charlie; had three years in Church army, Sydney. Splendid grasp of English, excellent

helper when not pre-occupied with young family; speaks Kuuk Yak and other dialects.

Edward Dick Willing young helper, average ability, medium knowledge of English.

Frank Holroyd Policeman at Palm Island, uncle of Edi Holroyd, a helpful informant for Muŋkan dialects.

Frank Dalabugam Not used, potential informant.

Freddie Ta:yoř Employed at Meranda Station near Normanton, out from Bandrook, brother to Bruce who was hurt in the shooting accident; both sons of old Jimmy Thaayorr.

Harry Charlie Used at Cairns before his eye-operation, willing informant, good speaker, clear voice, precise for elicitation, story-teller, hard worker, cooperative.

Jack Bruno In mid 50's, married to Koko Mintyana woman and lives at Mitchell River. He is a brother or cousin of Luke Charlie who helped as an informant at Mitchell R.

Jerry Ned Village horse-man, stock-rider, knows several Muŋkan dialects, willing informant, friendly and understanding.

Joseph Pita Melaman Married to Angelina, a willing informant at Edward River. Helped for three weeks during imprisonment with Teddy Rogers, at Palm Island; good English, dramatic story-teller, good at translation of elicited sentences, untiring.

Kalu Edward Brother of Clive Edward, employed at Glenobah Station outside Normanton as stockmen.

Lawrence Foot Son-in-law of Mayk Edwards (now deceased), is store assistant, Church representative, excellent English and intelligent helper. Spent 9 weeks in Brisbane as informant at Summer Institute of Linguistics; bush-name "Pam me:renma"; able to take initiative in elicitation work.

Luke Charlie Employed at Inkerman Station (with Morton Coleman); helpful and willing, singer and tale-teller.

Miki Edwards Willing helpful, slow, with limited English.

Molly Stepmother of Edna, helpful informant, good at interpreting tapes, limited English.

Morris Coleman Brother of Pantha and Vincent, good story-teller; limited English, willing informant, cooperative.

Morton Coleman Brother of Pantha, helpful informant, young and prefers the outdoor, works on cattle stations.

Pantha Coleman Excellent story-teller, knows Kuuk Yak, good on elicitation, moderately good knowledge of English, dramatic and oratorical, pleasing personality. Spent 3 weeks in Brisbane as full-time informant, a counsellor at Edward R.

Patrick Roger Not used, married to Dora, potential informants.

Pita Roger Not used, boatscrew boy, potential informant, did 6 months at Palm Island with Joseph and Teddy.

Polly Brian Excellent informant, knows also Muŋkan dialects from her father; spent two weeks in Cairns and several weekends in Brisbane as informant in Thaayorr, her mother's language; cooperative and used to taping or elicitation.

Teddy Roger Used for 3 weeks as informant during his year at Palm Island with Joseph Pita etc. Good story-teller, average knowledge of English, slower worker, willing; voice not so clear for taping. Married Rita. Has knowledge of many older legends and is willing to tape them.

Tom Foot Brother to Lawrence, both sons of old Jimmy Foot. School-teacher, good English, alert helper, husband of Myrtle Edwards, herself a good informant, intelligent for elicitation and taping the results. Not used very often.

Vincent Coleman

Elder brother in clan, second to Eddy; excellent in stories, legends, singing, music, and enjoys taping all of them. English less developed than Pantha's. He is better at telling stories than in transcription from tape; potential reservoir of culture.

William Charlie

Village headman and 'Keŋ' - an elder counsellor and tribal leader. Good helper in several dialects, willing and intelligent, desiring to be exact. Tapes stories and legends well. Has been used for sign language enquiry. Village butcher and authority in the community. Owns Edward River mission area and as such has pre-eminence.

Recently deceased:

Mayk Edwards:

From Station Creek, spoke also Kuuk Yak, the 'Snake' language. Cargo boat hand for 7 years; mission and government carpenter; yardman, sailor. Excellent informant and dramatic story-teller, knowing a large number of old traditions and customs; father-in-law to Lawrence and Tom Foot. Died of a heart attack after a drinking bout late in 1968.

Appendix G

Procedures for cataloguing tapes

The identification of tapes required various elementary rules to make field materials readily available, and acceptable for the archives of the Australian Institute of Aboriginal Studies, Canberra. These rules are:[1]

1. Field tape report sheets are completed and returned with each tape, except where more detailed documentation is given to the Institute.

2. The collector's name and the field tape number is marked on the tape leader, the spool and the box.

3. The collector's name, field tape number, the date, location and language, with the informant's name(s) and any other relevant information is spoken on to the beginning of each track. Where several items are recorded on a tape, appropriate identification is spoken before or after the items.

4. Standard tape speed for speech is usually three and three quarters IPS and for music, $7\frac{1}{2}$ IPS. Often, these speeds are halved for economy in field conditions.

5. The tape numbering system is chosen by each collector to suit a particular purpose, as on different field trips.

6. Block letters are used for all names of people, places, groups and languages, thus ensuring clarity of intention.

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[1] From the A.I.A.S. memo concerning the best cataloguing of field tapes, 1966.

Appendix H

A.I.A.S. orthographical chart

The following interim chart was the 'best compromise' which could be devised by the Linguistic Group considering four different types of orthography.[1] These are the phonetic, the phonemic, the pedagogical and the practical.[2]

Bilabial	(Inter)dental	Alveolar	Retroflex	Palatal	Velar	Glottal
b	dh	d	dd[3]	dj[4]	g	'
p	th	t	tt	tj	k	
m	nh	n	nn	nj	ng	
	lh	l	ll	lj	n-g	
		rr	r			
			rh			
w				y		
v	(Table 62)	s			gh[5]	

Vowels i, e, a, o, u Length - double the vowel

r = retroflexed fricative rh = retroflexed flap

rr = dental alveolar flap, rolled fricative

v = bilabial fricative s = alveolar fricative

gh = velar fricative

n-g to be used where both intervocalic ŋ and n + g occur in a language. Interdentals to be written with h following consonant. Retroflexion to be written by doubling the consonant.

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[1] Linguistic Group which met in Canberra, May, 1968. See the Document No. 68/721; 66/91 Pt. II, Australian Institute of Aboriginal Studies, Canberra, (Field Report No. 9).

[2] See section 2.1.6 of this thesis, on page 20.

[3] This analys s would favour rd, rt, rn and rl.

[4] The present analysis would prefer y in place of j and reserve /j/ for dj above.

[5] The symbols q or x are preferred to the digraph gh .

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