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The Mulinypata Language

of

North-West Australia

by

Michael James Walsh

A thesis submitted in conformity with
the requirements for the degree of
Doctor of Philosophy at the Australian
National University.

September 1976

For my parents.

Unless otherwise acknowledged this thesis is the
original work of the author.

Michael Walsh

Michael James Walsh

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PLEASE NOTE

pp. 170 - 171, bound in wrong order, p. 170 should be p. 171 and p. 171 should be p. 170.

also

2 pages numbered p. 202, second one should be labelled p. 202a.

Abstract

This study presents a synchronic description of the main dialect of the Muɲinypata language of North-West Australia.

It is divided into six chapters. The first is introductory placing Muɲinypata in the context of Australian languages, giving some background to the area in which the language is spoken and assessing previous work on this group. The second chapter provides a phonological description and an account of morphophonological change. The segmental phonology is presented in a distinctive feature format. Some tentative rules are advanced to account for stress. The third chapter establishes the word classes of Muɲinypata, briefly discussing their defining characteristics. A preliminary discussion on noun classification is embarked upon which is given a fuller semantic basis in chapter six. Chapter four presents the morphological facts of the language: data which assist the description of verbal morphology are presented in Appendices 2 and 3. Chapter five provides a preliminary discussion of Muɲinypata syntax. A brief account of the semantics of the language is given in chapter six, with particular emphasis on noun-classification. Three sample texts are provided in Appendix 4.

The bulk of the text is concerned with synchronic description of the phonology and morphology of the language. Their unusual complexity demand lengthy discussion with a more detailed account of the syntax and semantics being reserved for a later study.

Abbreviations and Conventions.

ABS	absolute case
Aux	auxiliary
BEN	benefactive
COM	comitative
DAT	dative
du	dual number
DUB	dubitative
EMPH	emphatic
ERG	ergative case
exc	exclusive (pronoun)
FEM	feminine (at least one member of the group is female)
FUT	future tense
HAB	habitulative/habitual
IMPERF	imperfective aspect
inc	inclusive (pronoun)
INST	instrumental case
INTERROG	interrogative
LOC	locative
MASC	masculine (the group consists entirely of males)
MP	morphphonological rule. A particular rule is identified by a number eg. MP-6 [2.1.10.17].
NC	noun classifier
NEG	negative
NI	number indicator
NP	noun phrase
PERF	perfective aspect

pc	paucal number (from three to around ten)
pl	plural number (more than paucal ie. about ten or more)
RECIP	reciprocal
REDUP	reduplicated
REFL	reflexive
RR	redundancy rule
SBR	syllable boundary rule
sg	singular number
SIB	"sibling". Used to refer to a group whose members are of the same subsection
SR	stress rule
TOPIC	topicalizer
VR	verb root
1	first person
2	second person
3	third person

Person-number "status" combinations for pronouns appear as

2sg

1 du exc MASC

3 pc SIB

() indicates optionality

{ } indicates that at least one of the enclosed
must be chosen

* when appearing before a form or sentence indicates unacceptability for native speakers (whether a grammaticality or semantic anomaly) or otherwise indicates an underlying form to which a morphophonological rule must be applied before it attains an acceptable surface form.

When appearing after some word in a text it refers to a footnote at the bottom of that page.

Mujinypata sentences are generally supplied with an interlinear gloss, morpheme-by-morpheme, together with an English translation of the complete sentence. Non-pronominal NP's do not specify number or definiteness while pronominal NP's are particularly detailed in their reference: in the interests of readability the former tend to be overspecified in the English translation while the latter are underspecified:

'the/a old man/men/boss(es) is/are sitting over there
(remote)'

might be rendered as "the old man is sitting over there"

(Mujinypata : pule pagu)

and "we two exclusive non-siblings at least one of whom is female will wash the lower legs of you few (three to about ten) siblings" which represents a fairly full translation of the Mujinypata word: manantarmupu|nuginda is simplified in its translation.

The forms are given in underlying form in the morpheme-by-morpheme presentation since it is not possible to non-arbitrarily assign morpheme cuts to a form after the morphophonological rules have acted on the form.

. syllable boundary

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1.1 Linguistic Type.

1.1.1 Muɲinypata is an Australian Aboriginal language spoken (as a first language) by about five hundred people mostly at Port Keats, N.T. The language makes up a separate language family in itself, apparently unrelated to its linguistic neighbours [Wurm 1972:122]. It is not a typical Australian language although it is typical for its area.

The languages of the north-west of Australia are typically prefixing, and, either dual classifying or multiple-classifying [Capell 1940:244-5]. The Daly Family languages to the north and east of Muɲinypata all show noun classification of some sort, generally multiple classification [Tryon 1974:289, 293-4]. To the south of the traditional territory of the Muɲinypata is the Djamindjungan Family; this has four members one of which, Nungali, is said to be multiple-classifying while the other three are non-classifying [Bolt, Cleverly, Hoddinott 1970:593; Wurm 1972:122]. Languages of the north-west are characterized by verb morphologies with a large number of form classes and by the use of auxiliaries [Birk 1974], [Capell and Elkin 1937], [Coate and Oates 1970], [Love 1938], [Metcalf 1972], [Tryon 1974] et al.

Muɲinypata is a multiple-classifying, prefixing language with complex verb morphology including auxiliaries. It is thus typical for its area - the more so since the writer's own fieldwork indicates that Djamindjung, a member of the Djamindjungan family bordering on Muɲinypata, is multiple-classifying despite the statement to the contrary above.

1.1.2 Phonologically Muɲinypata is quite unusual in Australia in having a voiced/voiceless distinction in stops. Essentially [2.1] there is a five-place stop-nasal series: bilabial, apico-alveolar, apico-domal, lamino-palatal and dorso-velar. There are three laterals corresponding to the non-peripheral places of articulation of the stop-nasal series. In these two respects at least, Muɲinypata follows Australian phonological patterns [Dixon 1970]. There are two semivowels, labio-velar and palatal and three rhotics: a resonant and trill with apico-alveolar articulation and an apico-domal resonant. There is a four-vowel system, the two parameters being relative highness versus lowness and relative frontness versus backness. In initial position the language allows any of the stops and nasals, the semivowels, the apico-alveolar lateral, l, and very occasionally the apico-alveolar resonant rhotic, ɺ. Three words begin with a vowel viz. awu "no"; a "or", possibly a loan word from English; eyn^yd^yal "angel", certainly an English loan word. Words may end in most consonants or in a two-member cluster. Intervocally two and three-member consonant clusters occur. The assignment of stress is rather complicated and will be treated later [2.2]. Words may have anything from one to fifteen (or more) syllables.

1.1.3 The parts of speech (word classes [3]) are as follows: noun, noun-classifier, pronoun, adjective, verb, adverb, adjective/adverb qualifier, particle, and interjection. There are ten noun-classifiers [3] which precede the noun they classify. The pronouns distinguish four numbers:

singular, dual, paucal and plural in all persons. First person has an inclusive/exclusive distinction in dual and paucal numbers. There is a two way distinction in duals and paucals between groups made up of members of the same subsection and groups not so composed. There is a further distinction for the latter between groups which are all masculine and those which are not. Third singular pronouns show a distinction between masculine and feminine. All pronouns may inflect in an absolutive-ergative pattern as do nouns.

1.1.4 Nouns, noun-classifiers, pronouns (and adjectives) may appear with case-suffixes for absolutive, ergative, instrumental and dative case functions. Other functions are signalled by prepositions, post positions, or both together, or, by word order.

1.1.5 Verbs have an extraordinarily rich morphology. Principal syntactic functions are signalled by cross-referencing bound pronouns. These pronouns appear in a nominative-accusative pattern. Indirect objects are also cross-referenced. There are a large number of verb classes conjugated by auxiliary somewhat like Ngarinyin [Coate and Oates, 1970:54] but more similar to Malak Malak [Birk 1974] in that any verb may occur with a number of auxiliaries (provided it is semantically feasible).

1.1.6 Sentence modification is carried out by particles which convey temporal, aspectual and locational information.

1.2 Dialect Situation.

1.2.1 The term "Mujinypata Language" is a cover term for three separate speech forms. The usage follows that of the local population who say 'There are three "ways of talking": Mujinypata, Mujinykuja and Mujinydiminin but these are all Mujinypata'. The speakers of the Mujinypata dialect predictably claim that their dialect is the best, clearest and most euphonious of the three. The name itself is suggestive of this bias:

mujin^y-pata
language-good
"good language"

The other two dialects come out as:

mujin^y-kuja
language-water
"water language"

and

mujin^y-diminin
language-gravel
"gravel language"

1.2.2 It is difficult to say why these descriptions have been used. These names may suggest the geographical locations of the traditional areas in which the dialects were spoken: Mujinykuja has a border on the water while Mujinydiminin is inland (although the country is not notable for its gravel).

Furthermore the use of the term

da diminin

place gravel

"gravel country"

was not considered appropriate for the traditional dialect area of Mujinydiminin.

1.2.3 Informants offered some metalinguistic suggestions but these have not been closely checked and cannot be held as being reliable. Mujinydiminin was said to be so named because it was a "rough" language:

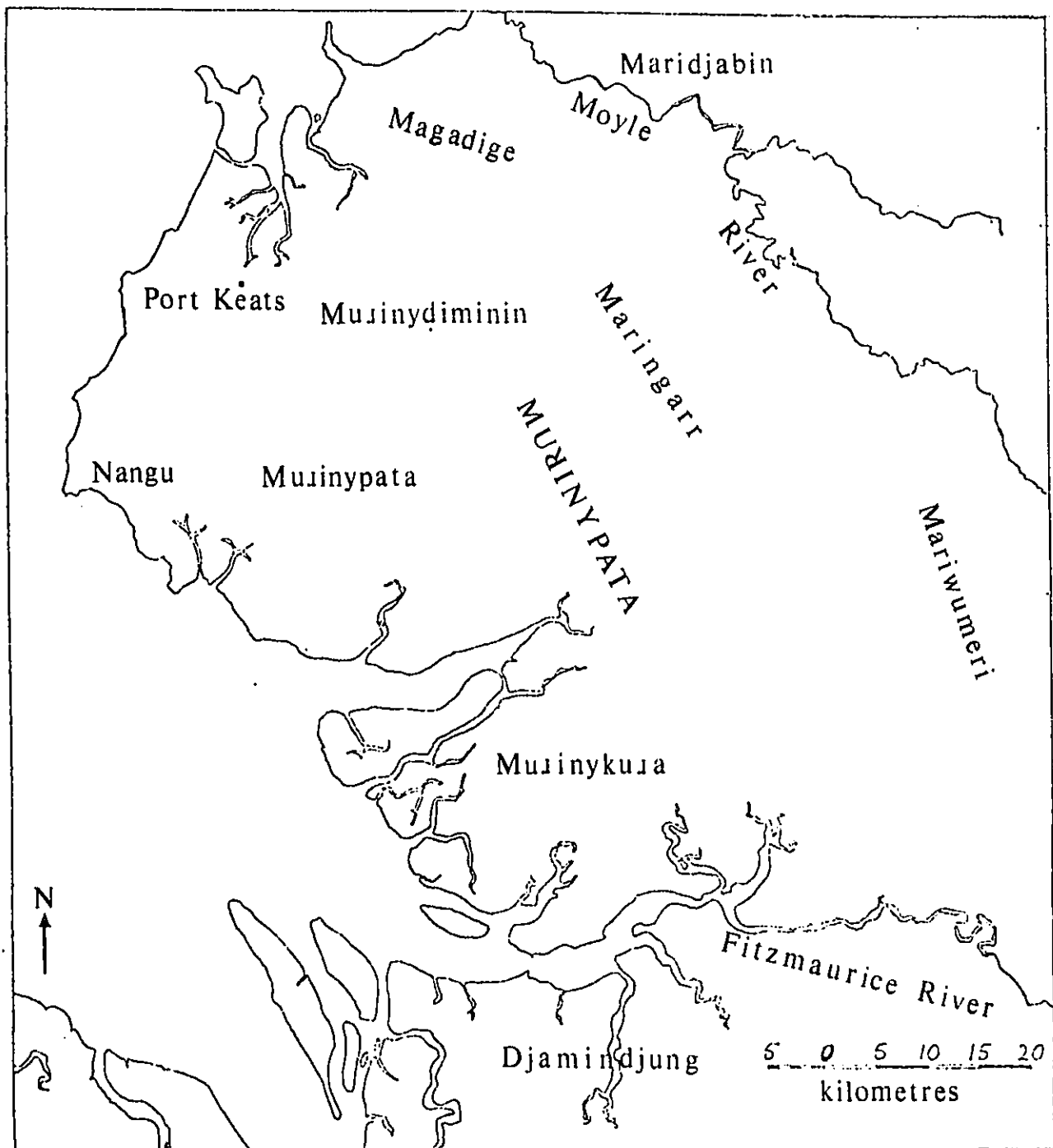
pewetipeweti ninipun^y diminin

rough like gravel

"rough like gravel"

Mujinykuja, however, was so-called because it is "soft" (see also Falkenberg [1962:13]).

The other metalinguistic parameter employed was "heavy" vs. "light". "Lightness" was considered a virtue in a language; Mujinypata is "light". Mujinykuja and Mujinydiminin were said to be "heavy" and thus not so easily understood. Informants complained of the writer's lack of clarity in diction for the reason that his speech (often described as Broad Australian) was "heavy - like a Yankee"!.



1.2.4.A Language Map of Port Keats Area.

1.2.4 The distribution of dialects is given in the map (1.2.4.A). For the distribution of clans and hordes see Falkenberg [1962:pp21ff. esp. 23].

1.2.5 What little has been collected of Muɔinykuɔa and Muɔinyɔiminin indicates that they are very closely related (over 80% shared vocabulary, there being similar percentages between Muɔinyɔata and the other dialects). It has not been possible to elicit reliable names for the three dialects in the Muɔinykuɔa or Muɔinyɔiminin. The practice through this work will be to use the name of a language in that language. Throughout the description (unless otherwise stated) the term Muɔinyɔata will apply to the Muɔinyɔata dialect of the Muɔinyɔata language. (See also [1.4]).

1.2.6 Presently most speakers of Muɔinyɔata live at Port Keats Mission (formerly Muɔinyɔiminin territory). There are some speakers at Kununurra W.A. and a few speakers working at stations to the south. Muɔinyɔata acts as a lingua franca for the Port Keats area: nearly the total population of Port Keats (c.1000) understand and regularly use Muɔinyɔata even if it is not their first language. Perhaps a third to a half of the population have Muɔinyɔata as their "first language" although the term is dubiously applied when there is much tribal intermarriage and very many people are bi- or multi-lingual.

1.3 Surrounding Languages.

1.3.1 No detailed discussion of the surrounding languages and their relationship with Muɔinypata will be given here.

Tryon [1974] gives an account of the Daly Family languages which covers the northern and eastern linguistic neighbours of Muɔinypata.

The southern linguistic neighbour, the Djamindjungan Family, is described by Cleverly [1968]; Bolt, Cleverly and Hoddinott [1970] and Bolt, Hoddinott and Kofod [1971].

1.3.2 Lexically Muɔinypata is not closely related to its neighbours. Tryon (personal communication) indicates that Muɔinypata shows few cognates with any of the Daly languages. Street [1973b] conducted a survey at Port Keats in which the Brinken and Tyemeri subgroups of the Daly Family [Tryon: 1974, xiii] and Djamindjung are compared with Muɔinypata. The writer has compared Muɔinypata vocabulary from his own field notes with Tryon's word lists for the Daly Family languages [1974:267-286] and with vocabulary from Cleverly's [1968] Djamindjung vocabulary. This is given in the table: 1.3.A. The results essentially agree with those of Street.

1.3.A Percentages of shared cognates between Muɔinypata
and its linguistic neighbours: Djamindjung and the Daly
Family.

	Muɔinypata
Djamindjung	9.0
Mullukmulluk	3.5
Tyeraity	5.8
Matngala	3.5
Yunggor	1.8
Kamor	4.1
Marithiel	8.7
Marityaben	10.5
Mare Ammu	9.9
Maridan	8.2
Maramanandji	8.7
Marengar	10.5
Maranunggu	8.1
Ami	8.1
Manda	7.6
Pungupungu	5.2
Wadyiginy	5.2
Batyamal	5.8
Ngangkurrunggurr	9.9
Ngengomeri	9.9

Percentages of shared cognates within the Daly Family
is given in Tryon [1974:xiv]. Predictably the percentages
are marginally higher for those languages which are
geographically closer to Muɔinypata.

1.4 Language Names.

Nomenclatures in the literature dealing with the Port Keats area have presented a confused picture. This is because too little attention has been paid to what a language name can refer to.

Falkenberg and Stanner recognized that "each tribe has its own names for itself and surrounding tribes" [Stanner 1960:18] so that "When a person speaks of another tribe, he usually does not use that tribe's term of self-designation". "Therefore, if one wishes to know the correct name of a tribe, one must ask a member of that tribe." [Falkenberg 1962:11]. But in addition there are often a number of designations for a given language within that language, see, for example, Rigsby [1976:68-9] and Sutton [1975].

One source of confusion has been the perpetuation of a distinction between Garama and Muɻinypata. Davidson [1938] refers to Karaman (=Garama) "south-west of Katherine, on the Daly River". This is reiterated by Tindale [1940:218]. Capell refers to Garama [1940:244] without mention of Muɻinypata and again in his survey of Australian languages [1963:Area N,8] this time mentioning Muɻinypata (Murinbada Area N,16) but not linking it with Garama. O'Grady, Voegelin and Voegelin [1966:76] give Garama and Murinbata as the two members of the Garaman family. This is reiterated by Oates and Oates [1970:21] but Tindale more recently [1974:140,232] gives Karama (Garama, Garaman) as alternative names for Murinbada. This is based on information he received from Stanner and is essentially correct.

The situation now seems to be clear although not simple. Garama is the term used by the Djamindjung group (south of the Fitzmaurice River) to refer to the group of dialects known by their speakers as Muɟinypata (1.2.1). It might be useful to refer to the cover term as Muɟinypata₁ and the particular dialect as Muɟinypata₂. The writer's Djamindjung informants [Walsh 1972] indicated that their term, Garama, corresponded to Muɟinypata₁. Although they were aware that there were at least two dialects, Muɟinypata₂ and Muɟinykuɟa they did not have names in common use which would distinguish them. They did provide descriptive labels for these dialects which were literal translations of the Muɟinypata₁ names:

lin^y - d^yalag

language - good

"Muɟinypata" (good language)

lin^y - gugu

language - water

"Muɟinykuɟa" (water language)

but admitted that these were not in common use.

A Muɟinypata₁ man could give Garama as the language he spoke (especially if he was in a situation where it was appropriate for him to use the Djamindjung label). However, one could not tell from this whether he spoke Muɟinypata₂ or Muɟinykuɟa. In fact it is likely that he would speak Muɟinykuɟa rather than one of the other two dialects. This is just because a large number of

Mujinykuja speakers have moved away (to the south) either to Kununurra or to stations where there are Djamindjung speakers (this information comes from my own fieldnotes). In this way Mujinypata₁ people who are most in contact with those who use the term "Garama" viz. the Djamindjung tend to be Mujinykuja.

This assessment of the situation is supported by a number of observations. Tindale [1974:140], discussing Murinbata tribal structure, notes:

"A few informants have been met away from their country in the lower Victoria River area. Among them was a Murinbata man who preferred the name Karama for his tribe." "He did not mention the name Muringura although it is very likely he was one of the people so called, in process of being absorbed into the Murinbata."

The Mujinypata₁ man prefers the name "Karama" because he is living in traditional territory of the Djamindjung and it is indeed very likely that he was one of the Mujinykuja.

Mujinykuja was termed Garama by the informants of Hale [MS] and Capell [MS]. Checking these data with informants showed that the speechform was Mujinykuja. It was no doubt under the guise of Garama that this dialect entered O'Grady, Voegelin and Voegelin (op. cit.)'s classification and assumed status as a separate language. Tindale's suggestion that '... Karama (probably means "water folk")...' [1974:232] is

not borne out by Djamindjung speakers who say "it is just a name". Tindale also gives Mariwada and Mariwuda as alternatives for Muɟinypata. The latter term is used by the Maɟingar tribe to refer to Muɟinypata₁ and Muɟinypata₂. In Maɟingar "maɟi" means "language or tribe" while "wuda" is said to have no meaning, "just a name". The Maɟingar call Muɟinykuɟa, Maɟiwudi:

maɟi - wudi
 language - water
 "water language"

They also gave a literal translation of Muɟinypata₂ but said that it is not actually used:

maɟi - gadi
 language - good
 "good language"

Tindale also lists Nagor and Nangu (op. cit. 232) as alternatives (see also Stanner [1933]) but Falkenberg has pointed out this is only a horde name [Tindale 1975:140]. Although it is only a horde name it does occur among the range of terms the Muɟinypata₁ use to refer to speech forms.

Thus some Muɟinypata₁ will refer to their language as Muɟinynangu ie. "Nangu language" because their country (ɟa) lies in that area. At another level they are Muɟinypata₂ speakers since the Muɟinypata₂ dialect traditionally covered that horde area of Nangu. Alternatively they may call their

language, Yak (or Jak) nangu, (the prefix, yak- ~ Jak- indicating language of, people of"). This prefix may be used with place names which are more geographically specific than those used to refer to horde areas - for example, it may be used with a name for a sacred site which is particularly associated with that person (his totem site for example).

Also, a Muɲinypata₁ may designate his language in terms of his principal totem. For example, a man whose principal totem is "sugarbag" may refer to his language as:

muɲin^y - t^yitayyi¹

language - sugarbag (generic)

"sugarbag language" ie language of a person
 of the sugarbag totem.

Since white contact (see [1.6] the bulk of the Muɲinypata₁ have lived at the Port Keats Mission. The Mission area occupies what was traditionally the clan area of Yidiyi (Falkenberg's Idiji [1962:23]). A Muɲinypata₁ may now refer to his language in terms of its geographical location, labelled by the term for a traditional clan area. Thus a man who lives in the Yidiyi clan area will say his language is Muɲiny-yidiyi, the language spoken by the people who presently occupy but are not traditionally associated with the clan area of Yidiyi. His clan area may in fact be Nangu in which case he would speak Muɲinypata₂ but if his clan area is Yidiyi we would not expect his language to be Muɲinypata₂ (although that is what he would most commonly speak) but Muɲinyɖiminin. In this way, it is feasible for a particular person

¹ Jak- ~ yak- may not be prefixed to a totem name.

to provide the following names for what he speaks:

Term	Designation in terms of
Muɬinypata ₁	"his language"
Muɬinyɖiminin	"his dialect"
Muɬinynangu	"his clan area"
Muɬinyyidiyi	"where he now lives"
Muɬinytyitayyi	"his principal totem"
Muɬinybatuk	"the place name of his totem site"
Yak- ~ ɬak-	"place name associated with him"
and Muɬinytyipmam	"Aboriginal language, literally 'black language' "

In conclusion a language name may consist (sometimes) of parts which come from different languages. This is said to be only a "joke", referred to as:

muɬin^y - d^yegd^yeg

language - play

"play language"

muɬin^y - kumugaɬ

language - "joke"

"joke language"

but informants have produced such forms spontaneously. An example would be:

muɬin^y - kati

language - good

"Muɬinypata₁"

"muɬin^y" is from Muɬinypata₂ and "kati" from Maɬingar.

Perhaps a rough equivalent would be for a speaker of English to refer to his language as

"englische talk" or "anglais lingo"

1.5 Background.

The traditional territory of the Muɬinypata was fairly flat lightly wooded country bordering onto extensive mangrove swamps and then to the sea. For an account of the topography of this area see Flood [1966:1-4] and Keast [1953].

To enter into an account of the traditional life of the Muɬinypata here would merely be repetitious. See Stanner [1936, 1964] and Falkenberg [1962].

1.6 Recent History of the Area.

Port Keats was discovered by Captain Philip Parker King on the 6th September 1819. A Mr Septimus Roe explored some of the area on foot; at his request the bottom of the port was named after Vice Admiral Sir Richard G. Keats G.C.B. [King, 1827:277]. Signs of Aborigines were seen here (footprints and fires) and the people themselves were sighted further south on Lacrosse Island [King, 1827:289].

Later a Captain Stokes made contact with the local population in a more dramatic way. While ashore at Point Pearce (in the Nangu area) Stokes was speared only just managing to escape with his life:

"Another moment, and ours would have been the fate of so many other explorers; - the hand of the savage almost grasped our throats - we should have fallen a sacrifice in the cause of discovery, and our bones left to moulder on this distant shore, would have been trodden heedlessly under foot by the wandering native". [Stokes, 1846:110].

It is fortunate for the Aboriginal population that Port Keats has been so isolated. Stokes was obviously disappointed about not being able to launch a punitive expedition:

"Several excursions were made during our stay in search of the natives, but without success. An encampment was found in the neighbourhood, near a small fresh-water swamp, and by the things that were left behind it was evident that a

hasty retreat had been made. It would have been as well if we could have punished these people in some way for their unprovoked attack; but to have followed them far into the bush would have been quite useless." [Stokes, 1846:111]

Likewise Alfred Searcy over fifty years later regrets that there are too many witnesses to start shooting when he is merely threatened for his trespass:

"I am certain of one thing, if the niggers had shown up to my mates and myself when we were out of sight of the boat, and had behaved in a similar manner, they would have had a bad time. It was not wise to have too many witnesses when inflicting summary punishment. The coxswain of my boat was a man not to be trusted." [Searcy, 1906:197].

Despite the isolation older people among the Muɲinypata speak of whites having shot relations of theirs (see also Flynn and Willey, [1963:135]). No-one has spoken of poison food or of the planned punitive expeditions found in other parts of Australia.

If whites killed natives sporadically it may account for the local hostility towards whites. The most famous instance is the murder of three Japanese by Nemaɲluk (nimaɲlak "type of spring"; placename) described in a highly fanciful way by Idriess [1941] and more accurately by Brother Pye MSC [1972, 1973], also by Willey [1964:142-144], Willey [1965]; Flynn and Willey [1963:144-145].

It is claimed that prior to 1935 the Muɲinypata were a hostile people killing whites and fighting with other tribes and amongst themselves. It is rather difficult to estimate the truth of this claim since there was practically no white contact before that time. (The accuracy of what has been recorded is rather dubious since local people do not corroborate the white man's account.)

In 1935, Fr R. Docherty MSC accompanied by Dr W.E.H. Stanner (now Emeritus Professor of the Australian National University) founded a Roman Catholic mission at Port Keats. The Muɲinypata₁ who had been occupying traditional territory were brought together into one community. In the early days Fr Docherty had groups of people work for two weeks at the mission and then "go bush" for two weeks. In this way, people retained their links with the land and had the opportunity to resume their former life-style. Gradually people have become more and more established in the township and the returns to the land are becoming less frequent. Other tribal groups have moved in so that former enemies now live side by side. The former religion described in such detail by Stanner [1964] has been largely eradicated although some token gestures are made in the liturgy of the local church. Aborigines eat white "food", (tea, sugar, flour, tinned meat and tobacco) instead of their abundant and varied traditional diet: fish, turtles, oysters, crabs, mangrove worms, ducks, geese, bustard, emu, brolga, lizards, native fruits, yams etc..

The language appears to be gradually dying out to the despair of those who have known pre-mission days. It is to be

hoped that the bilingual education programme being undertaken by Chester and Lyn Street of S.I.L. (commenced 1973) will avoid this gloomy prospect.

What remains of traditional life? The bark paintings (see also [1.7.1]) being produced at Port Keats today are only a recent innovation - not even a development out of something traditional. Some of this art can only be viewed as a pandering to the white man's thirst for the exotic (see Stanner [1968:38-39]) not something that springs from the culture itself. Old men have said that the dancing which is made much of is "not what we did in the old days". Perhaps it is only the music which lasted through. The kirman (songman) says that a songman has to remember songs and music that have come before and to compose his own. He is still composing and still singing the songs of men long dead but what will happen after him?

1.7 Previous Work.

1.7.1 Non-Linguistic. Two figures stand out among those who have studied the Muɲinypata: Stanner and Falkenberg. The Port Keats area and the Muɲinypata specifically appear frequently in the literature on Australian Aborigines. This is not so much because there has been a lot of study conducted specifically on the Muɲinypata but rather through comments or studies derived from Stanner and Falkenberg's work.

Stanner's association with the Muɲinypata goes back to the first significant white contact (see [1.6]). He has kept up contact with the Muɲinypata since the mission was set up.

Stanner's published work has engendered much discussion in other more general works. On kinship and totemism, for example, Elkin [1950] and Yengoyan [1968] have drawn on Stanner [1936]. The monograph on religion is referred to in Berndt [1974], Eliade [1973], Hiatt [1971], Maddock [1970], Nevermann, Worms, Petri [1968], and Weidkuhn [1965] to mention a few.

Falkenberg's work was carried out in 1950 giving a later perspective on Stanner's studies of the middle thirties. Falkenberg's studies on kinship and totemism are described in "Kin and Totem: Group Relations of Australian Aborigines in the Port Keats District" [1962]. Many writers have followed up this work placing it in a more general picture. A recent instance is Birdsell [1970].

The reason there has been so much secondary work on the Muḷinypata would seem to stem from the quality and comprehensiveness of these two scholars. In attempting to give a general picture of social organization in Australia it is quite difficult to find accounts with the detail needed.

Likewise derivative is much of the published mythology of the Muḷinypata such as Greenway [1965], Poignant [1967] and Robinson [1956, 1966]. These derive from material contained in Stanner's monograph on Aboriginal religion [Stanner, 1964] (Robinson had access to unpublished material by Stanner).

Apart from Stanner and Falkenberg, there has been a study of the bark paintings conducted by Dr H. Groger-Wurm in 1967. The results have not yet been published. Examples of the bark painting of the Muḷinypata can be found in AIAS [1965], Kupka [1965] and Robinson [1956, 1965]. Louis A. Allen, a private art collector from Palo Alto, California, has an extensive collection of paintings from Port Keats and intends to write a book on the art of the Australian Aborigines incorporating these. The recent trends are described by Rev F. Flynn [Flynn and Willey, 1963:215-221].

Stanner [1960] has worked on rock art to the south of Port Keats but indicates that the art was not produced by any known tribe extant now. Another site, Papangala (papa- "war-cry", ḡala "big"), to the north east has a few paintings but again local people evince no knowledge of their origin (see also Flynn and Willey, [1963:134].

Mulvaney has excavated in the Port Keats area while Flood has made a detailed study of Yarar rock shelter [1966, 1970].

Some song materials have been recorded by Hoddinott, Maddock and Moyle and lately by Walsh (1972-74). These recordings are held in the tape archive of the AIAS.

1.7.2 Linguistic.

1.7.2.1 Capell in the late thirties collected material in Garama (ie Muḷinykuḷa) following his own Materials [1945]. This is generally accurate but misses (as does everyone else) the palatal nasal in the word for "language": muḷin^y.

1.7.2.2 The Rev W.H. Flynn MSC was a missionary stationed at Port Keats shortly after the war. His is the earliest extended study of Muɔinypata. The writer has seen his MS studies in about a dozen exercise books. Flynn is reported to have been a fine linguist (ie polyglot) but had little if any strictly linguistic training. The result is typical of an amateur even an intelligent one: initial velar nasals are often not recognized and retroflexes are rarely recorded. The verbs are conjugated after the style of a Latin primer, completely disguising the remarkable richness of pronouns in Muɔinypata [4.1]. In addition, the material elicited has a strong bias towards missionary use rather than towards traditional life and culture.

1.7.2.3 Kenneth Hale collected a little material; basic vocabulary and some sentence elicitation in the space of a few hours from an itinerant, Muɔinypata₁, camel-driver outside Alice Springs in the early sixties. The language was given as Garama and did turn out to be Muɔinykuɔa. Hale kindly made available to the writer in 1972 this material with some analysis.

This is by far the most accurate of any of the previous work on the language. The sketch phonology is essentially correct while the ergative/instrumental suffix is given which is most surprising since ergative case marking is nearly always so redundant (see [4.1]) that it is not given spontaneously.

1.7.2.4 Another missionary, Rev M. Bailey MSC, was an extremely talented amateur. He has produced an excellent coverage of the language (held at Missionaries of the Sacred Heart Monastery, Kensington, Sydney). This concentrated on the very complex verb morphology. Phonetically it is generally accurate and is the first to recognize the prevalent morphophonemic alternation [2.10] (although he admitted that he could find no motivation for the alternations).

1.7.2.5 A third missionary, Rev I.M. Sims MSC, has had some linguistic training and could have made a good job of recording Muɲinypata. Unfortunately after having acquired a good speaking knowledge he was transferred to Bathurst Island Mission after only a few years (1967-1970). He has recorded a little Muɲinypata₂ (AIAS Archive Tape: A1419) which is the earliest recorded material of this dialect readily available.

1.7.2.6 Currently Chester and Lyn Street of the Summer Institute of Linguistics are working on Muɲinypata with a view to producing literacy materials. They have produced preliminary descriptions of the phonology [Street and Street 1974] and of the verb structure [Street and Street 1975].

2 PHONOLOGY

2.1 Segmental Phonology

2.1.1 Mujinypata has twenty-seven segmental phonemes:

twenty three consonants and four vowels. These are as follows:

	Bilabial	Lamino- dental	Apico- alveolar	Apico- domal	Lamino- palatal	Dorso- velar	Glottal
Voiceless stop	p	(t̪)	t	t̺	tʲ	k	(ʔ)
Voiced stop	b		d	d̺	dʲ	g	
Nasal	m		n	n̺	nʲ	ŋ	
Lateral			l	l̺	lʲ		
Resonant			ɹ	ɹ̺			
Resonant trill			r				
Semivowel	w				y		

2.1.1.A Mujinypata Consonantal Phonemes.

Vowels

	<u>front</u>	<u>back</u>
high	i	u
low	e	a

2.1.1.B Mujinypata Vocalic Phonemes

2.1.2 However, there are two residual problems in the phoneme inventory of consonants. /t/ and /ʔ/ have been put in brackets because of their doubtful phonemic status.

2.1.2.1 There is just one minimal pair contrasting a voiceless lamino-dental stop with a voiceless apico-alveolar stop: [tʰáʔi] "white egret"; [tʰáʔi] "tree". Informants insist that each of these should be given a separate pronunciation. They also stated that neither word was a loan from another language although they have volunteered such information for other words. What is problematic is the fact that in every other case [tʰ] and [tʰ] are in free variation. Thus /tek/ "black cockatoo" has among its realisations: [tʰek] and [tʰek].

2.1.2.2 There is also another phonemic problem associated with the single occurrence of a glottal stop. [ʔ] occurs in [múʔmun] "water-rat" but in no other word in the language. Informants claim that this is not a loan word. Furthermore neighbouring languages to the south: the Djamindjungan family (see Cleverly, Bolt, Hoddinott 1970) do not have the glottal stop nor do languages to the east and north: the Daly family (see Tryon, 1974:287-289). Any attempt to leave out the glottal stop [múmun] or replace it with some other stop eg [múkmun] was rejected by informants. There does not appear to be any phonological conditioning which could account for the presence of a glottal stop.

Thus words such as [múŋu] "bone"; [kʰúmu|úŋ] "blood"; [máŋman] "butterfly (generic)" and [múkmuk] "brain" have phonetic environments similar to that of [múʔmun] but may not have a glottal stop. In view of informants' insistence that the glottal stop is distinctive in this word it will be tentatively entered in the phonemic inventory. However /ʔ/, like /ɛ/, will not play any further part in the phonemic description and no attempt is made to include them in the phonological description in terms of distinctive feature matrices (2.1.9).

2.1.3 Apart from these two problems Muɰinypata is a fairly typical Australian language in its phonology. Basically, it has a stop system with five places of articulation. There are five nasals corresponding in place of articulation to the stops and three laterals corresponding in point of articulation, to the non-peripheral stops and nasals. The general pattern for Australian languages west of the Gulf of Carpentaria is for there to be $n-2$ laterals associated with n stops and nasals, the two peripheral points of articulation accounting for the reduction from n . In addition, Muɰinypata follows the general Australian pattern [Dixon 1972:2-3, Dixon 1970: 80-84] in having two semivowels, a labial, w , and a palatal, y .

Muɰinypata is atypical in having a distinction in voice for the stop series and in having three r -sounds instead of the usual two, a semi-retroflex continuant and a flap. Also it has four vowels rather than the most common three vowel system.

2.1.4 Phonemic Contrasts.

The phoneme is regarded as the smallest unit in the phonological description which can distinguish meaning. Since phonetic similarity is necessary before two phones may be allocated to the one phoneme minimal pairs will be provided only for suspicious pairs eg. contrasts such as ɹ/r̥ are stated because it is reasonable that they might be allophonic variants. However such contrasts as p/ɸ illustrated by a pair like [pi:] "string" and [ɸi:] "death adder" are not considered to be significant.

The basis of the phonemic analysis is illustrated by the following sets of words contrasting realisations of the putative consonant phonemes in identical or near identical phonetic environments.

2.1.4.1 Initial Contrasts.

ɹ/t	ɹayi	"white egret"
	tayi	"tree"
t/ɸ	talman ^y d ^y i	"music"
	ɸalman ^y	"insect (sp.)"
t/t ^y	tamal	"neck"
	t ^y aban	"initiation ceremony"
d/ɸ	daɹipi	"skin"
	ɸaɹanin	"forked sticks"
d/d ^y	deɹe	"ant (sp.)"
	d ^y eɹi	"(hot) wind"

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d/ɸ	daɹipi	"skin"
	ɸaɹanin	"forked sticks"
d/d ^y	deɹe	"ant (sp.)"
	d ^y eɹi	"(hot) wind"

p/b	pi	"string"
	bi	"mudfish"*
t/d	tiɿi	"nest"
	ɕirmu	"paint"
	ɕimu	"tooth"
t/d	taɿal	"headband"
	deɿet	"mob"
tʲ/dʲ	tʲe	"ear"
	dʲe	"crab (sp.)"
k/g	ke	"bloodwood tree"
	gek	"(a) spurt of water"
n/ŋ/nʲ	nini	"water buffalo"
	nan	"what's it's name?"
	ŋiŋ	"dream"
	nʲini	"this"

There are no initial contrasts for the laterals, resonants or vowels since /l/ is the only one of these to occur initially. y/w are not distinguished for obvious reasons.

*See spectrograms in Appendix 1 for contrast of [p] and [b] initially and medially.

2.1.4.2 Medial Contrasts.

t/ṭ	-wetṭi-	"seek, look for"
	pewetṭipewetṭi	"rough"
t/tʸ	pata	"good"
	batʸu	"foreign"
t/d/ḍ	muta	"personal name"
	wuda	"definitely not"
	waḍa	"now"
d/dʸ	ninda	dual, non-feminine marker
	kanindʸen	place name
p/b	pepe	"below"
	bebe (illustrated by spectrograms for two different speakers)*	"vomit"
ṭ/ḍ	does not occur in the corpus	
tʸ/dʸ	denʸtʸir	"3sg is sweating"
	nanʸdʸi	"noun classifier"
k/g	pekpek	"soft"
	begbeg	"bark (of dog)"
ḍ/ɹ [ɹ]	maḍa	"belly"
	maɹa	"today"
n/ŋ	punu	"3sg will go"
	paŋu	"grass (sp.)"

*See Appendix I.

n/nʸ	nʸini	"this"
	nʸinʸi	"2sg. pronoun"
l/ɭ	ŋapulu	"breast"
	ŋapuɭu	"I will wash 3Sg."
l/lʸ	palin	"handle"
	palʸir	"rock"
ɟ/r/ɾ	yara	snail (sp.)
	yaɾa	place name
	yara	place name
ɟ/r	meɾeɭ	"journey"
	mereɭ	"type of nut"
ɟ/ɾ	puɾunu	"3sg. will move"
	puɾunu	"3pl. will move"

2.1.4.3 Final Contrasts.

t/ɬ	walet	"flying fox"
	neɬ	"boil"
	naɬ	"2sg. brought it"
t/tʸ	tut	"woomera (type)"
	tʸetʸ	"possum (sp.)"
d/ɖ	none attested	
d/dʸ	none attested	

p/b	yirtʏip	"cat"
	dʏebdʏeb	"food"
t/d	none attested	
t̚/d̚	panmat̚	"he hit him"
	baɖbaɖ	"right (vs. left)"
tʏ/dʏ	none attested	
k/g	pekpek	"soft"
	begbeg	"bark (of dog)"
n/ŋ	nan	"what's its name?"
	ŋiŋ	"dream"
n/nʏ/ŋ	mun	"lily root (sp.)"
	punʏ	"initiation ceremony"
	peŋ	"rubbish"
l/ɭ	ŋantaɭ	"I bite off (a piece of food)"
	ŋantaɭ	"I open (the door)"
l/ɭʏ	none attested	

2.1.5 Realisations of Consonant Phonemes.

2.1.5.1 All stops have unaspirated allophones and unreleased allophones. Voiceless stops also have aspirated allophones which share the highest frequency with the unaspirated allophones. Peripheral stops and apico-alveolar stops have fricative allophones with corresponding places of articulation. These tend to be the lowest in frequency of the allophones for those

phonemes. /p/ also has a labiodental fricative allophone [f]. The apico-alveolar stop phonemes have apico-alveolar, apico-dental and lamino-dental allophones, apico-alveolar being the most common. Laminal stop phonemes have alveolar and alveo-palatal affricate phonemes. /w/ is sometimes rounded at the lips but is more commonly unrounded with the articulation at the lips slightly further forward than would be normal for English. /ɹ/ is realised as an apico-alveolar continuant [ɹ] most commonly but also as an apico-alveolar flap [ɾ]. There is no significant allophonic variation for the other consonant phonemes.

2.1.5.2 Allophones of Stop Phonemes.

	Aspirated Stop	Unaspirated Stop	Unreleased Stop	Fricative	Affricate
/p/	p ^h	p ^o	p ⁻	ɸ f	
/t̪/	t̪ ^h				
/t/	t̪ ^h	t̪ ^o	t̪ ⁻	θ	(lamino-dental)
	t ^h	t ^o	t ⁻		(apico-alveolar)
	t̪ ^h _n	t̪ ^o _n	t̪ ⁻ _n		(apico-dental)
/t̪/	t̪ ^h	t̪	t̪ ⁻		
/tʲ/	tʲ ^h	tʲ ^o	tʲ ⁻		ts tʃ
/k/	k ^h	k ^o	k ⁻		
/b/		b ^o	b ⁻	β	
/d/		d̪ ^o		ð	(lamino-dental)
		d ^o	d ⁻	-	(apico-alveolar)
		d̪ ^o _n			(apico-dental)
/d̪/		d̪ ^o	d̪ ⁻		
/dʲ/		dʲ ^o	dʲ ⁻		
/dʲ/		dʲ ^o	dʲ ⁻		dz dʒ
/g/		g ^o	g ⁻	ɣ	

2.1.5.3 Distribution of Allophones.

The aspirated allophones of stops occur word initially, finally and intervocalically but not as the first member of a consonant cluster. Note that only voiceless stops have aspirated allophones. The unaspirated allophones may occur in any position and are the most commonly occurring in each position. The fricative allophones only occur intervocalically. The allophones of the alveolar phonemes with dental articulation occur much less frequently in the same positions as their alveolar counterparts but have been observed most commonly in initial position. The affricate allophones of the laminal stop phonemes occur word initially and word finally. The alveolar and dental allophones of /n/ are in free variation; [n̪] has been observed most commonly in initial position. The most fronted variety of /w/ occurs before /u/. The apico-alveolar flap [ɾ] occurs intervocalically between segments specified as

+ syllabic α low -α front	ie. /a/ and
---------------------------------	-------------

/i/ (see [2.1.9]). Voiced stops tend to get devoiced in final position.

2.1.6 Distribution of Phonemes.

2.1.6.1 Word initial.

Stops, nasals and semivowels may occur initially. Of the laterals only /l/ has been observed in initial position, and then only infrequently. /ɹ/ has been observed initially in a few words *ɹaɹiman* "name of a spirit", *ɹidʲa* "razor", as has /a/. /e/ has been observed initially in one loan

word from English, eynYdYaI "angel".

2.1.6.2 Word final.

Stops, nasals, vowels may occur finally. Two of the laterals, /l/ and /l̥/ occur finally, and two of the resonants /ɹ/ and /r/; /y/ may occur finally. /w/, /l̥/ and /r/ do not occur finally. Voiced stops occur very infrequently in final position: they are often devoiced in final position cf. German.

2.1.6.3 Intervocalic.

All non-vocalic segments may occur intervocalically.

2.1.6.4 Consonant Clusters.

2.1.6.4.1 Intramorphemic.

2.1.6.4.1.1 Two member clusters.

Because there are relatively many consonants viz. 23 in Muɹinypata the number of combinations of any two consonants which can be generated is correspondingly quite large (529 ie. 23^2). Of the 529 possible combinations only 93 occur so that it will be more revealing if we list combinations of classes of consonants in a number of separate charts.

From these charts a number of generalisations emerge:

- (1) The second member of two member intramorphemic cluster tends to be peripherally articulated (57 of the 93 observed clusters follow this tendency).

(2) Liquids as first members of clusters form a proportionally large number of clusters (34 of the 93 observed). Apart from these some weaker observations can be made.

(a) Nasal-stop clusters tend to have the stop member voiced.

(b) Heterorganic nasal-stop clusters tend to have a peripheral stop (following (1)).

(c) Clusters consisting of two stops tend to agree in voicing.

2.1.6.4.1.1.A Nasal-stop clusters.

2nd 1st	p	t	t̥	tʷ	k	b	d	d̥	dʷ	g
m	X					X	X	/		X
n	X			X		X	X	X	X	X
ŋ	/				X	X		X		
nʷ		/		X		X			X	
ŋ					X	/	X			X

Where / indicates just one occurrence observed; X indicates at least two occurrences observed.

2.1.6.4.1.1.B Nasal - nasal

2nd 1st	m	n	ŋ	nʷ	ŋ
m		X		X	X
n	X	X			
ŋ					
nʷ	/				
ŋ				/	

2.1.6.4.1.1.C Stop - stop

1st \ 2nd	p	t	t̚	tʲ	k	b	d	d̚	dʲ	g
p		X			X					
t	X	X		X	X				X	/
t̚	X				/					
tʲ	X									
k	X				X			/		
b										
d										
d̚						/				
dʲ										
g						X				

2.1.6.4.1.1.D Stop - nasal

1st \ 2nd	m	n	ɳ	nʲ	ŋ
p	X				
t	X				
t̚	(/)				
tʲ		/			
k	X				
b					
d					
d̚					
dʲ					
g	/				

In addition the following two-member clusters have been observed:

nasal - semivowel	ny	X
	(ŋw)	
semivowel - consonant	ytʲ	/
	yk	X
	yw	/
	yy	X
stop - semivowel	pw	/

2.1.6.4.1.2 Three member clusters.

The following three-member intramorphemic clusters have been observed:

ytp	taytpir	"true"
	taytpi	"lip, mouth"
	mandaytpe	"place name"
lkm	melkmelktayyi	"spoonbill"
(lkt	melkmelktayyi	"spoonbill")*
lmb	walmbur	"testicles"
	walmbu	"place name"
rkp	dakirkpaŋ	"loin cloth"
	purkpurk	"dance"
rŋk	werŋka	"wild"
rŋk	taŋŋkin	"taipan"

*Possibly this word is dimorphemic: melkmelk - tayyi

? - lip, mouth

Stress can sometimes be used as a diagnostic for morpheme breaks (2.2.2.5) but here the stress pattern is suggestive but not conclusive: mélkméltáyyi SSSU

It can be seen that such clusters are not common. Excepting ytp, three member clusters consist of a lateral or rhotic followed by two peripheral consonants (nasals or stops) ie.

$$\begin{Bmatrix} l \\ r \\ r' \end{Bmatrix} \begin{Bmatrix} \text{peripheral stop} \\ \\ \text{peripheral nasal} \end{Bmatrix} \begin{Bmatrix} \text{peripheral stop} \\ \\ \text{peripheral nasal} \end{Bmatrix}$$

2.1.6.4.2 Intermorphemic Clusters.

2.1.6.4.2.1 Two member clusters.

The distribution of two member inter-morphemic clusters is quite different from that of the intramorphemic clusters. It will be seen that phonological changes occur across morpheme boundaries (2.1.10.17). This means for example that an intramorphemic cluster such as ny can never occur as an inter-morphemic cluster because of MP-2 or MP-3 (2.1.10.18). Similarly while nd occurs intramorphemically it is ruled out intermorphemically by MP-9 which converts nd to nɳ; the geminate cluster nn which appears in the fairly common word punnu "liver" is impossible intermorphemically because of the geminate nasal reduction rule expressed by MP-11 (or MP-11').

The chart given contains many "accidental gaps" ie. there is no special reason why these clusters should not occur but they have not

been observed. The clusters which have been observed number 162.

The combinations which do appear in the chart are based on the terminal consonants of the most commonly occurring affixes in the language. These are:

-nu

-te~je

-wa

-ka

-ya

which may be suffixed to any nominal or verbal root in the language. In addition the incorporated body part terms (4) and incorporated pronouns (4) may be suffixed to verbal auxiliaries and to adjectival roots. In summary we have -C for body parts and pronouns as:

p	t		tʷ	k
b	d	ɖ		
m	n		nʷ	ŋ
	l			
w			(y)	
	ɹ			

2.1.6.4.2.1.A Initial Consonants of frequently occurring morphemes.

These may be suffixed to verbal auxiliaries where the final consonant (others end in vowels)

is m or n and adjective roots which may end in p t k n^y as well as ṭ and t^y although the latter have a limited distribution since some of the combinations are not semantically feasible. In summary these are:

p	t	(t)	(t ^y)	k
m	n		n ^y	

2.1.6.4.2.1.B Final consonants of frequently occurring Morphemes.

2.1.6.4.2.1C Two-member Intermorphemic Consonant Clusters.

1st	2nd	p	t	t̥	tʰ	k	b	d	d̥	dʰ	g	m	n	ŋ	nʲ	ɲ	l	l̥	lʲ	lv	w	y	j	ɹ	r
p		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
t		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
t̥		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
tʰ		x	x	x	x	x	x	x	x	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)		
b		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
d		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
d̥		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
dʰ		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
g		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
m		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
n		x	x	x	x	x	x	x	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	x	x	x	x	x	x	x	x	(x)		
nʲ		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
ɲ		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	x	x	x	x	x	x	x	x	x	x	(x)		
l̥		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
lʲ		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
lv		x	x	x	x	x	x	x	x	x	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	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	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	x	x	x	x	x	(x)		
ɹ		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		
r		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	(x)		

where x = cluster occurs (observed in at least two forms)
 0 = cluster cannot occur because the first member of the hypothetical cluster does not occur morpheme finally.
 (x) = cluster cannot occur because of morphophonemic rules (2.1.10)

2.1.6.4.2.2 Three-member Intermorphemic Clusters.

These have much in common with three member intramorphemic clusters in that the first two members of the cluster must be l or r followed by a peripheral stop or nasal, or y followed by a voiceless stop (yt has not been observed):

$$\left\{ \begin{array}{l} \left[\begin{array}{l} l \\ r \end{array} \right] + \text{peripheral} \left[\begin{array}{l} \text{stop} \\ \text{nasal} \end{array} \right] \\ y + \text{voiceless stop} \end{array} \right\}$$

To these can be added:

-nu, -te/-je, -wa, -ka, -ya

The adjective root, tawayt^y "slow", may form a three member cluster with any of the consonants given in 2.1.6.4.2.1.A provided the result is semantically feasible. For example, we have

tawayt^y-φ-me

slow-3sg-foot

"He is slow of foot"

but hardly

*tawayt^y-φ-t^yi

slow-3sg-breast

?

2.1.6.4.2.3 Other Clusters.

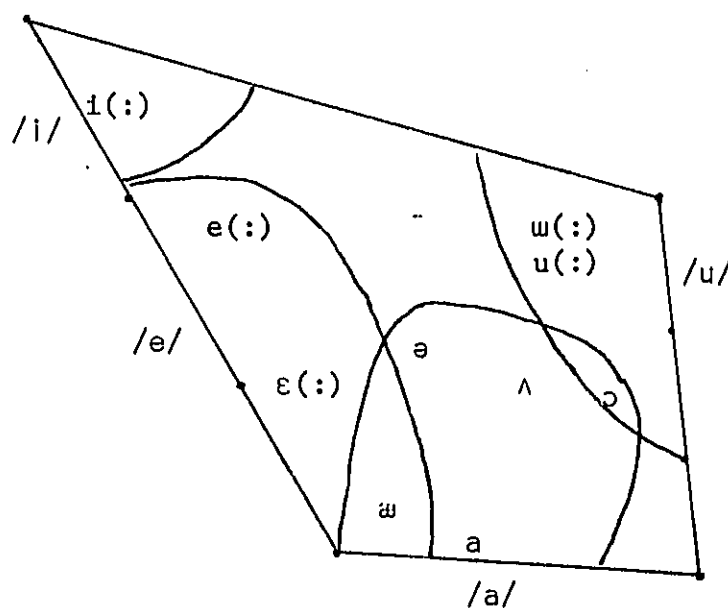
There are no vocalic clusters nor are there four member consonant clusters.

2.1.7 Vowels.

2.1.7.1 Muɔinyata has four vowels which contrast phonemically. Phonemically the relevant contrasts are relative highness versus relative lowness and relative frontness versus relative backness. Thus in purely articulatory terms the vowel phonemes could be represented as in this table:

	front	back
high	i	u
low	e	a

2.1.7.2 Allophonic Variation in Vowels.



2.1.7.2.A Approximate Positions of Vowel Allophones.*

*This plotting must be considered very approximate especially in view of Ladefoged's findings on judgments of cardinal vowel positions [1967:50-142].

Approximate positions of allophones are illustrated in 2.1.7.2.A. Lengthened varieties of allophones may occur in stressed syllables especially in monosyllabic words; they are also common before fricative allophones of stops and semivowels.

For /e/ a low front unrounded allophone [æ] has been heard in a few words eg /pemar/ [p^hæmar] "head hair"; /metʏitʏ/ [mætʏitʏ] "matches (<English)". [æ] in these positions varies with [ɛ] and is therefore assigned to /e/.

[ɔ] occurs as an allophone of /a/ in two words: /lawali/ [lɔwɔlɪ:] "upper leg"; /lawanga/ [lɔwɔŋgɔ] "wallaby". In these words it varies with [ʌ] and is thus assigned to the phoneme, /a/. Perhaps the more common [ʌ] is backed to [ɔ] by the presence of [w]. Against this is the fact that other occurrences of /a/ before or after /w/ do not allow as an allophone eg /wawa/ [wʌwʌ] "edible root".

*[wɔwɔ]

[æ] also occurs as an allophone of /a/ in a few words. /tʏalput/ [tʏælpʏt] "house"; /tʏalɪŋ/ [tʏæɪŋ] "belt". In these words it varies with [ʌ] and it might be supposed that [ʌ] has been fronted to [æ] by the preceding palatal. Because [æ] varies with [ʌ] it is assigned to /a/.

[ə] tends to occur in unstressed syllables. The most commonly occurring allophones are [ɛ] for /e/; [a], [ʌ] and [ə] for /a/ and [w] for /u/.

2.1.7.3 Vowel Contrasts.

2.1.7.3.1 Medial Positions.

The contrast between /e/ and /a/ is one of the most significant in the language since it is just this contrast which distinguishes reflexive from non-reflexive verb forms in the paradigms of many verbs. /e/ and /a/ also contrast in non verbal items.

mempu!	"I washed myself"
mampu!	" $\begin{bmatrix} \text{I} & \text{washed} & \text{3sg} \\ \text{3sg.i} & & \text{3sg.j}^* \end{bmatrix}$ "
yulun	"salmon"
yulin	"ashes"
tamal	"neck"
tamul	"spear"
me!	"sandfly"
mul	"fly (generic)"
wiwi	"bush tobacco"
wawa	"edible root (sp.)"
ɲuŋa	"sun"
ŋaŋa	"frog (sp.)"
wulbirk	"sugarbag (sp.)"
merk	"moon"

* i, j... indicate referential indices.

2.1.7.3.2 Final Position.

pi	"string"
pe	"lily nut (sp.)"
tʲu	"weapon (generic)"
tʲi	"2sg. will sit"
ba	"wasp (generic)"
bi	"blue swimmer crab"
ke	"panimenko nut"
ku	"meat/animal (generic)"
ka	"interrogative particle"
piɡunu	"3rd person paucal sibling pronoun"
piɡuna	"3rd person dual sibling pronoun"

2.1.7.4 Interpretation of Diphthongs.

These phonetic diphthongs have been observed:

[aⁱ] ~ [ʌⁱ]; [eⁱ] ~ [ɛⁱ] and [uⁱ] ~ [wⁱ] ~ [ɔⁱ].

There is no phonetic diphthong [iⁱ] nor are there any diphthongs with labio-velar glides. Phonetic diphthongs are interpreted as a vowel followed by a semivowel in the phonemic description. Thus [kʰaⁱkʰaⁱ] "shout" is represented phonemically as /kaykay/.

The alternative solution would be to treat a diphthong phonemically as a sequence of two vowels. Blake and Breen [1971:31-32, 42] in describing Pitta-Pitta have phonemicized glides with their corresponding vowels since the occurrence of a glide rather than its syllabic

equivalent was predictable from the environment. If this approach were adopted [k^haⁱk^haⁱ] "shout" would be phonemicized as /kaikai/. Roots with the other diphthongs such as [t^hyeⁱt^hy] "listen" and [p^haŋgoⁱyi:] "long" would be phonemicized as /t^hyeit^hy/ and /panguiii/.

If the vowel plus semivowel interpretation is adopted the kinds of syllables which can occur can be simply stated by the expression: CV(C)(C). Otherwise additional syllable types have to be included - for /panguiii/ above, for example, we would need CVC, CVV and VV, ie paŋ.gui.ii. Secondly realisation rules will have to be set up to decide when a given written vowel symbol (in the phonemic orthography) is to be interpreted as syllabic or non-syllabic. Thus given a word like [naⁱwoⁱyii] "jellyfish" if we phonemicize it as /naiuuiii/ we must have realisation rules which will assign syllabicity to the correct phonemic segments. Adopting the vowel plus semivowel interpretation we have /naywuyyi/ wherein the syllabic boundaries (as observed) can be stated by the following single expression:

$$\phi \rightarrow . / \text{ --- CV}$$

In the alternative solution we must have complicated rules which will avoid the interpretation of /naiuuiii/ as *[na.yo.wi.yi].

2.1.8 In the section on allophonic variation in consonants (2.1.5.2) we saw that the apico-alveolar stop phonemes have lamino-dental, apico-dental and apico-alveolar stop allophones. Of these allophones the lamino-dentals occur least commonly

while the apico-alveolar allophones occur the most commonly. Lamino-dental stop phones are in free variation with apico-alveolar stop phones.

However Street and Street [1974] in what is admittedly a preliminary phonological description assign the lamino-dental phones to the same phoneme as they assign the laminal palatal phones while the apico-alveolar (and presumably the apico-dental) phones are assigned to an apico-alveolar phoneme. They claim that [t̪] and [tʲ], and, [d̪] and [dʲ] should be assigned to laminal phonemes represented either as /t̪/ and /d̪/, or, /tʲ/ and /dʲ/. The lamino-dental phones are said to be in complementary distribution with the apico-alveolar phones. Before a vowel [tʲ] and [dʲ] are said to occur only before the front vowels, viz. /i/ and /e/ while [t̪] and [d̪] occur only before the back vowels, viz. /a/ and /u/. Other environments have not been dealt with. Such an interpretation is supported by the similar pattern found in many Australian languages [Dixon 1970] where there is a single laminal with the same sort of allophonic variation as has been suggested for Muɲinypata.

The Streets claim therefore that there is a consistent phonemic opposition between lamino-dental stops and apico-alveolar stops. This section shows that such a view will not hold (with the single exception already mentioned [2.1.2.1]). The distributional argument has a large number of counter-examples. A non-exhaustive list of forms in which a lamino-palatal stop precedes a back vowel follows. The writer's phonemicisation is given for each form together with a typical phonetic shape for the form - to include all the

phonetic realisations for each form would not be practicable.

tʲu [tʲu]

"weapon"

batʲu [batʲu]

"foreign"

tʲuŋuʲaka [tʲuŋuʲakʰə]

"paddle"

tʲukin [tʲukʰin]

"sock" (English loan word derived from "stocking")

tʲaŋaʲi [tʲaŋaʲi:]

subsection name

tʲaŋala [tʲaŋala]

subsection name

tʲabitʲin [tʲabitʲin]

subsection name

tʲabaŋ [tʲabaŋ]

"a stage in an initiation ceremony"

tʲamanin [tʲamanin]

"type of bush country"

tʲandu [tʲandu:]

"boat"

tʲalput [tʲælpʰut]

"house"

tʲalpʊŋ [tʲælpʰʊŋ]

"rat (sp.)"

tʲapaŋaye [tʲʌpʰʌŋaⁱɛ]

"wax"

tʲaɹʊŋ [tʲaɹʊŋ]

"cloth"

tʲaguɖa [tʲʌgw:ɖʌ]

"rat-hole"

tʲambitʲ [tʲambi:tʲ]

"unmarried man"

tʲama [tʲʌmə]

"food-trading"

tʲalŋ [tʲæŋ]

"belt"

tʲandumaɖa [tʲandw:maɖə]

"dish"

minʲdʲawur [minʲdʲæwʷ:r]

"scraper"

maɹidʲambal [maɹidʲambal]

"edge"

A rather large number of examples has been provided because it was argued by Street and Street [op.cit.] that the few counterexamples they had noted could be treated as exceptions to the general pattern they were setting up. The exceptions noted were mostly the subsection names. A good case could be put for the subsection-names being recent borrowings especially since the subsection system was only introduced recently [Stanner 1936] and therefore likely candidates for a "special" phonological system [Henderson 1951:74] within the language. However the semantic range represented by the examples given above which, with the exception of t^yukin, are not considered loan words by native speakers renders the claim that there are a few exceptions scarcely credible.

The interpretation adopted here is to assign [t̥] to /t/ (with one exception [2.1.2.1]) and [d̥] to /d/. Native speakers freely vary [t] with [t̥] and [d] with [d̥] while any attempts to vary "across phonemic borders" are rejected. [tʲ] and [dʲ] are assigned to /tʲ/ and /dʲ/ respectively.

2.1.9 Distinctive Feature System.

2.1.9.1 The features adopted in the phonological description of Muɔinypata are for the most part articulatory. They have been drawn partly from Chomsky and Halle [1968] and partly from McCawley [1967] while the others have been devised independently to suit the language-specific situation.

Features have been chosen with a view to accounting for the phonetic facts of the language and to express the

morphophonemic alternation in a compact and revealing way. Fant [1971:179] has objected to the encoding of classes of sounds by distinctive feature specifications in a way which is phonetically unrealistic. "It is questionable whether an inhibition of the lateral command (ie. [- lateral]) in the production of an [l] automatically results in an [r] - sound. Additional adjustment may be necessary. These examples are analogous to the [- coronal, + anterior] encoding of labial consonants which I consider more objectional." This account attempts to avoid such objections.

No attempt has been made to include the two suspicious phonemes /ɬ/ and /ʔ/ which have only one occurrence each in the entire corpus and thus could not be expected to take part in general phonological processes.

2.1.9.2 Description of the Features.

2.1.9.2.1 Major Class Features.

Syllabic. Syllabic sounds form a syllable peak. Non-syllabic sounds do not form a syllable peak. The feature [SYLLABIC] is chosen in preference to [VOCALIC] for the reasons set out in McCawley [1967:526] and Fant [1971:178]. This feature distinguishes vowels from consonants.

Sonorant. Sonorants include all sounds which are not stops or nasals, those sounds being non-sonorants, or, obstruents. Obstruents involve an obstruction which prevents a continuous flow of air during the sound.

For an acoustic definition see Ladefoged [1971:109] and acoustic correlates of this and the other major class features see Fant [1971:177-178].

Consonantal. Consonantal sounds are "produced with a radical obstruction in the midsagittal region of the vocal tract; nonconsonantal sounds are produced without such an obstruction" [Chomsky and Halle, 1968:302]. This feature separates off semivowels and vowels ([-CONSONANTAL]) from stops, nasals and liquids.

Nasal. A further feature, [NASAL] is required to subdivide the class of sounds specified by the features $\begin{bmatrix} + \text{SONORANT} \\ + \text{CONSONANTAL} \end{bmatrix}$ ie. nasals and liquids.

Nasal sounds have air flow through the nasal cavity throughout the sound. Non-nasal sounds do not have an air flow through the nasal cavity.

The four major class features redundantly specify the phonetic classes as follows:

	Syllabic	Sonorant	Consonantal	Nasal
Stops	-	-	+	-
Nasals	-	+	+	+
Liquids	-	+	+	-
Semivowels	-	+	-	-
Vowels	+	+	-	-

2.1.9.2.1.A Redundant Matrix showing Phonetic Classes.

2.1.9.2.2 Cavity Features.

PERIPHERAL - Peripheral sounds are sounds formed at the lips or in the dorsal region ie. at the periphery of the vocal tract. [PERIPHERAL] is the converse of the feature [CORONAL] in the Chomsky-Halle system so [+ PERIPHERAL] is equivalent to [- CORONAL] and [- PERIPHERAL] is equivalent to [+ CORONAL]. The feature, [PERIPHERAL], is adopted, following other Australianists eg. Crowley [to appear], Eades [1976], and McKay [1975].

APICAL - Apical sounds are articulated with the tip (apex) of the tongue; non-apical sounds are not articulated with the tip of the tongue. This feature serves to distinguish apical consonants from laminal consonants ie. it subdivides the class of sounds characterised by the feature set:

$$\begin{bmatrix} - \text{SYLLABIC} \\ - \text{PERIPHERAL} \end{bmatrix}$$

This subdivision is effected by the feature [LAMINAL] in feature systems adopted by Austin [1975:2] and by Dixon [to appear]. Within the Chomsky-Halle framework a subdivision of this set of sounds is effected by the feature [ANTERIOR] but with the difference that alveolars, being [+ ANTERIOR], are set apart from domals which, together with palatals, are [-ANTERIOR]. It is appropriate for the Australian situation to have one feature which separates apicals from laminals.

HIGH - A further feature is required to distinguish apico-alveolar consonants from apico-domal consonants. The feature, [HIGH], is described by McCawley [1967:525] as "... the [+ high] segments ... are the segments whose primary constriction or closure is above a line drawn from the rear of the alveolar ridge to the uvula". Non-high sounds are sounds whose primary constriction or closure is below a line drawn from the rear of the alveolar ridge to the uvula. This feature will be used only for [- SYLLABIC] segments, unlike McCawley who includes vowels.

LATERAL - A feature is required to differentiate lateral liquids from non-lateral liquids. Lateral sounds are characterised by a complete closure by the tongue tip in the oral cavity with a release of air over the side of the tongue. Non-lateral sounds do not have a lateral release of the air flow.

Classes of sounds, grouped by point of articulation may be redundantly specified by the features [PERIPHERAL], [APICAL] and [HIGH] as shown in the chart.

	PERIPHERAL	APICAL	HIGH
labials	+	-	-
dorso-velars	+	-	+
apico-alveolars	-	+	-
apico-domals	-	+	+
lamino-palatals	-	-	+

2.1.9.2.2.A Cavity Features.

2.1.9.2.3 Source Features.

VOICE. Voiced sounds involve vibration of the vocal cords throughout the sound. Non-voiced sounds do not have vibration of the vocal cords. This feature serves to distinguish voiced stops from voiceless stops.

HEIGHTENED SUBGLOTTAL PRESSURE. Of the [- SYLLABIC] segments there is only one pair which do not each have unique feature specifications. This is the pair /ɹ/, /r/. Chomsky and Halle [1968:318] distinguish between the tap [ɹ] (one of the major allophones of Muɹinypata /ɹ/) and the trilled [r] in terms of subglottal pressure. "The distinction between the tap [ɹ] and the trilled [r] is produced by a difference in subglottal pressure: the trilled [r] is produced with heightened subglottal pressure; the tap [ɹ], without it." "The vibrations of the tongue tip ... are produced by the drop in pressure which occurs inside the passage between the tip of the tongue and palate when the air flows rapidly through it (Bernoulli effect). The trill is thus a secondary effect of narrowing the cavity without actually blocking it." Sounds which have heightened subglottal pressure are marked [+ HEIGHTENED SUBGLOTTAL PRESSURE] sounds which do not have it are specified [- HEIGHTENED SUBGLOTTAL PRESSURE]. This feature is relatively costly in the system in that it has been introduced just to separate off one segment. However it will only be explicitly specified when there is a need to distinguish all

the non-lateral liquids (rhotics).

All the features (cavity and source features) described above are only specified for segments which are [- SYLLABIC]. [+ SYLLABIC] segments have a separate feature system.

VOWEL FEATURES.

LOW. Low sounds have the highest point of the tongue relatively low during the articulation of the vowel. Non-low sounds do not have the highest point of the tongue relatively low during the articulation of the vowel.

FRONT. Front sounds have the highest point of the tongue relatively forward in the oral cavity during the articulation of the vowel. Non-front sounds do not have the highest point of the tongue relatively forward.

The designation of the features which differentiate the [+ SYLLABIC] segments is deliberately looser than the other definitions because the phonetic variability of the [+ SYLLABIC] segments is broader than that of the [- SYLLABIC] segments. Thus we have /a/ and /e/ having [ɐ] as an allophone and /u/ and /ɔ/ having [ɔ] as an allophone. To mirror the relative phonetic freedom of these segments their phonetic specification has been made freer.

2.1.9.3 The Redundancy Rules.

2.1.9.3.1 Statement of Rules.

RR-1* [- SONORANT] →

- SYLLABIC
+ CONSONANTAL
- NASAL
- LATERAL
- H.S.P.

RR-2 [- VOICE] →

- SYLLABIC
- SONORANT
+ CONSONANTAL
- NASAL
- LATERAL
- H.S.P.

RR-3 [- SONORANT]
 [+ VOICE] →

- SYLLABIC
+ CONSONANTAL
- NASAL
- LATERAL
- H.S.P.

RR-4 [+ NASAL] →

- SYLLABIC
+ SONORANT
+ CONSONANTAL
- LATERAL
+ VOICE
- H.S.P.

*Note that RR-1 is redundant in terms of RR-2 and RR-3, and is not necessary for the generation of the non-redundant matrix of Muɿinypata segments. It serves, however, to define the class of stops.

RR-5 [+ LATERAL] → $\left[\begin{array}{l} - \text{SYLLABIC} \\ + \text{SONORANT} \\ + \text{CONSONANTAL} \\ - \text{NASAL} \\ - \text{PERIPHERAL} \\ + \text{VOICE} \\ - \text{H.S.P.} \end{array} \right]$

RR-6 $\left[\begin{array}{l} - \text{SYLLABIC} \\ - \text{CONSONANTAL} \end{array} \right]$ → $\left[\begin{array}{l} + \text{SONORANT} \\ - \text{NASAL} \\ - \text{APICAL} \\ - \text{LATERAL} \\ + \text{VOICE} \\ - \text{H.S.P.} \end{array} \right]$

RR-7 $\left[\begin{array}{l} + \text{SONORANT} \\ - \text{CONSONANTAL} \end{array} \right]$ → $\left[\begin{array}{l} - \text{SYLLABIC} \\ - \text{NASAL} \\ - \text{APICAL} \\ - \text{LATERAL} \\ + \text{VOICE} \\ - \text{H.S.P.} \end{array} \right]$

RR-8 $\left[\begin{array}{l} + \text{SONORANT} \\ + \text{CONSONANTAL} \\ - \text{NASAL} \\ - \text{LATERAL} \end{array} \right]$ → $\left[\begin{array}{l} - \text{SYLLABIC} \\ - \text{PERIPHERAL} \\ + \text{APICAL} \\ + \text{VOICE} \end{array} \right]$

RR-9 [+ SYLLABIC] → $\left[\begin{array}{l} + \text{SONORANT} \\ - \text{CONSONANTAL} \\ - \text{NASAL} \end{array} \right]$

RR-10 $\begin{bmatrix} - \text{SYLLABIC} \\ - \text{CONSONANTAL} \\ \alpha \text{ PERIPHERAL} \end{bmatrix} \rightarrow [- \alpha \text{ HIGH}]$

RR-11 $\begin{bmatrix} - \text{SYLLABIC} \\ - \text{CONSONANTAL} \\ \alpha \text{ HIGH} \end{bmatrix} \rightarrow [- \alpha \text{ PERIPHERAL}]$

RR-12 $\begin{bmatrix} - \text{SYLLABIC} \\ \alpha \text{ APICAL} \\ \alpha \text{ HIGH} \end{bmatrix} \rightarrow [- \alpha \text{ PERIPHERAL}]$

RR-13 $[+ \text{ PERIPHERAL}] \rightarrow [- \text{ APICAL}]$

RR-14 $[+ \text{ APICAL}] \rightarrow [- \text{ PERIPHERAL}]$

RR-15 $[+ \text{ VOICE}] \rightarrow [- \text{ SYLLABIC}]$

RR-16 $[- \text{ H.S.P.}] \rightarrow [- \text{ SYLLABIC}]$

RR-17 $\begin{bmatrix} + \text{ LATERAL} \\ - \text{ APICAL} \end{bmatrix} \rightarrow \begin{bmatrix} - \text{ SYLLABIC} \\ + \text{ SONORANT} \\ + \text{ CONSONANTAL} \\ - \text{ NASAL} \\ - \text{ PERIPHERAL} \\ + \text{ HIGH} \\ + \text{ VOICE} \\ - \text{ H.S.P.} \end{bmatrix}$

$$\text{RR-18} \quad \begin{bmatrix} + \text{ LATERAL} \\ - \text{ HIGH} \end{bmatrix} \rightarrow \begin{bmatrix} - \text{ SYLLABIC} \\ + \text{ SONORANT} \\ + \text{ CONSONANTAL} \\ - \text{ NASAL} \\ - \text{ PERIPHERAL} \\ + \text{ APICAL} \\ + \text{ VOICE} \\ - \text{ H.S.P.} \end{bmatrix}$$

$$\text{RR-19} \quad [+ \text{ H.S.P.}] \rightarrow \begin{bmatrix} - \text{ SYLLABIC} \\ + \text{ SONORANT} \\ + \text{ CONSONANTAL} \\ - \text{ NASAL} \\ - \text{ PERIPHERAL} \\ + \text{ APICAL} \\ - \text{ HIGH} \\ - \text{ LATERAL} \\ + \text{ VOICE} \end{bmatrix}$$

$$\text{RR-20} \quad \begin{bmatrix} + \text{ APICAL} \\ - \text{ HIGH} \end{bmatrix} \rightarrow [- \text{ PERIPHERAL}]$$

$$\text{RR-21} \quad \begin{bmatrix} - \text{ PERIPHERAL} \\ - \text{ APICAL} \end{bmatrix} \rightarrow [+ \text{ HIGH}]$$

2.1.9.3.2 Redundancy Rules - Discussion.

A matrix of features defines each minimal phonological unit ie phoneme. The primary function of the redundancy rules is to specify values for every unspecified feature in every matrix. Redundancy rules reduce the number of features in

a matrix to just those which are necessary to define that segment. In the case of /r/ only one feature with its particular value is necessary to define the segment viz. [+ HEIGHTENED SUBGLOTTAL PRESSURE]; (henceforth: H.S.P.), the other nine features with their values are unambiguously recoverable by a redundancy rule (RR-19). Sometimes a segment may be defined by more than one minimal set of features because redundancy rules may overlap. For example, /m/ may be defined as

$$\begin{bmatrix} + \text{ NASAL} \\ + \text{ PERIPHERAL} \\ - \text{ HIGH} \end{bmatrix} \quad \text{or} \quad \begin{bmatrix} + \text{ NASAL} \\ - \text{ APICAL} \\ - \text{ HIGH} \end{bmatrix}$$

Choosing one set rather than the other is arbitrary except when one choice renders a phonological rule more revealing.

The redundancy rules will not be used as realisation rules in this study. For an account of this and of redundancy rules see Brown [1972:35-46] and Stanley [1967].

It will be seen that the redundancy rules may be used to define classes of sounds in a compact way. For example, the class of voiceless stops may be expressed by [- VOICE]. The different voiceless stops are then disambiguated by adding appropriate values for the three place-of-articulation features, [PERIPHERAL], [APICAL], [HIGH].

The first nine redundancy rules define classes of sounds by manner of articulation. RR-1 defines the class of stops, RR-2 and RR-3 divide stops into voiceless and voiced, respectively. RR-4 defines nasals while RR-5 defines laterals. The class of semivowels may be defined by either of RR-6 or RR-7. RR-8 defines the class of resonants (sometimes called "rhotics"). RR-9 defines the class of vowels.

RR-10 and RR-11 make the point that for a semivowel the value of its peripheralness is opposite that of its highness and vice versa. RR-12 states that a segment whose apicality and highness have the same value will have an opposite value for its peripheralness. By means of this rule labials and domals need not be specified for peripheralness. In the case of domals this information may be gathered from RR-14. It should be noted that the converse of rules RR-13 and RR-14 do not hold. Furthermore, it is worth pointing out the feature [- SYLLABIC] could be eliminated by a redundancy rule of a trivial nature of the form of RR-15 or RR-16. These are examples of a general phenomenon in this phonological feature system. That is, any segment which is specified for the features: [PERIPHERAL], [APICAL], [HIGH], [LATERAL], [VOICE] or [H.S.P.] is redundantly [- SYLLABIC]. Finally there are some examples given of redundancy rules which define single segments. RR-17 defines /ɪʏ/

since of the laterals there is only one which is non-apical. Similarly RR-18 defines /l/ which is the only non-high lateral. As pointed out above /r/ may be defined by just one feature the rest being recoverable from RR-19. The two rules, RR-20 and RR-21 tell us that alveolar segments ie. $\begin{bmatrix} + \text{ APICAL} \\ - \text{ HIGH} \end{bmatrix}$ are redundantly non-peripheral and that laminal segments ie $\begin{bmatrix} - \text{ PERIPHERAL} \\ - \text{ APICAL} \end{bmatrix}$ are redundantly high.

The table shows the segments non-redundantly specified. All the redundancy rules except RR-7 and RR-11 have been employed. If RR-7 and RR-11 had been used the feature specifications would have been slightly different but still non-redundant. RR-12 is only used for the domals not for the labials, their apicality being specified by RR-13. The labials could as well have been specified as $\begin{bmatrix} - \text{ APICAL} \\ - \text{ HIGH} \end{bmatrix}$.

2.1.9.3.A Non-redundant Matrix of Features for Mujinypata Segments.

[illegible]

2.1.10 Morphophonemic Change.

2.1.10.1 At morpheme boundaries there are a considerable number of predictable alternations. The purpose of this section is to state what the alternations are, set up single underlying forms for morphemes which have alternants and supply a set of ordered rules which derive the alternants in the appropriate phonological environments.

In the statement of the rules the conventions used are those of Harms [1968]. The braces (curly brackets) notation of Harms is used but applies vacuously. According to the braces convention stated by Harms [1968:59] the expansion calls for the interpretation as a series of ordered rules with higher line expansions preceding lower line expansions. For a cautionary note on the use of curly brackets see McCawley [1973:54].

Only one or two examples of each alternation have been given here for reasons of space. The alternations, however, are very common since many of them arise from an incorporated body part term being suffixed to commonly occurring verbal auxiliaries (see [2.1.6.4.2]).

2.1.10.2 It can be seen by comparing forms such as those below that there is alternation between /w/ and /p/.

- (1)* mam-ni-we-pu!
 3sg.-1sg.-head-wash
 "He washed my head"

*It should be pointed out that the glosses for the examples are underspecified at this stage since full glossing would assume knowledge given in [4].

- (2) mam- ϕ -pe-pu!
 3sg.-3sg.-head-wash
 "He_i washed his_j head"
- (3) mam-pun-pe-pu!
 3sg.-epl.-head-wash
 "He washed their heads".

We must decide whether the underlying form for "head" in incorporated form is /-we-/ or /-pe-/. In favour of a rule of the form:

$$p \rightarrow w/X \text{ ___ } Y$$

ie. /p/ becomes /w/ in the environment, X__Y, where X and Y have yet to be specified, is the fact that rules of this form, ie. lenition rules, are quite widespread in Australia, especially diachronically eg. Hale [1976a], [1976b], Rigsby [1976]. Against the adoption of a rule of the form:

$$w \rightarrow p/X' \text{ ___ } Y'$$

is the fact that hardening rules are less common in Australia. However, there are two good reasons for adopting the hardening type of rule. Firstly, /w/ becomes /p/ in a simply stated environment viz. when preceded by a non-high nasal. Secondly, every occurrence of /w/ becomes /p/ in this environment. By contrast, if we adopt the lenition type of rule we must specify X (in the rule we have stated generally above) in a

more complicated way viz, X is all segments which are non-high nasals. The rule becomes:

$$p \rightarrow w / \left\{ \begin{array}{l} \text{stops} \\ \text{laterals} \\ \text{high nasals} \\ \text{rhotics} \\ \text{semivowels} \\ \text{vowels} \end{array} \right\} \text{--- } Y$$

Assuming, then, that "head (incorporated form)" has an underlying form /-pe-/ (4) before the application of the rule, is:

(4) mam-ŋi-pe-pu!

and after the application of the rule:-

(5) *mam-ŋi-we-wu!

Because forms such as (5) must be starred it appears Y is non-null and must be specified at least so as to exclude -u!. Furthermore, merely to further specify the rule as

$$p \rightarrow w / \left\{ \begin{array}{l} \text{stops} \\ \text{high nasals} \\ \text{laterals} \\ \text{rhotics} \\ \text{semivowels} \\ \text{vowels} \end{array} \right\} \text{--- } u$$

is not sufficient since /-pun-/ alternates with /-wun/

"3rd pl. incorporated direct object pronoun" but not in the way stated by the last rule. Many more examples could be provided so that it would seem that there must be a morphological conditioning (in Y) if the lenition rule is to be preserved perhaps signalled by setting up two underlying /p/'s: /p₁/ and /p₂/ where /p₁/ triggers a rule such as

$$p_1 \rightarrow w / \left\{ \begin{array}{l} \text{stops} \\ \text{laterals} \\ \text{high nasals} \\ \text{rhotics} \\ \text{semivowels} \\ \text{vowels} \end{array} \right\} \text{ ---}$$

but p₂ does not. The alternative is to set up underlying forms in /w-/ for those forms which do alternate thus the rule is stated as

$$w \rightarrow p / \left\{ \begin{array}{l} m \\ n \end{array} \right\} \text{ ---}$$

One further objection to the hardening rule is the fact that it claims alternations for environments which have never been attested. Thus, amongst other things the hardening rule claims this alternation

$$p_{(1)} \rightarrow w / \text{r} \text{ ---}$$

although /rp/ is unattested. The rule adopted makes claims for alternation only for environments which have

been attested.

Hardening rules appear synchronically both in Australia and elsewhere. Ngandi, an Australian language of North-East Arnhem Land, has a rule which converts a palatal semivowel, *y*, to a (voiced) palatal stop, *j*, when preceded by a coronal stop (Heath [to appear a]: P-5, Hardening III, and Heath [to appear b]). Brown [1972:150] gives a diachronic (?) hardening rule for Lumasaaba which hardens voiced non-stops to corresponding voiced stops, following a nasal.

The reasons for choosing one interpretation for an alternation over another will be much the same for the alternations discussed below and for that reason will not be discussed in such detail again.

2.1.10.3 An alternation between /*y*/ and /*t^y*/ occurs in forms such as the following:

- (6) mam-ŋi-yi-pu!
 - 3sg.-1sg.-breast-wash
 - "He washed my breast(s)"
- (7) man^y-φ-t^yi-pu!
 - 3sg.-3sg.-breast-wash
 - "He₁ washed his_j breast(s)"
- (8) tuttut-ŋi-yi
 - cut off-1sg.-breast
 - "I am a person with excised breast(s)"

- (9) tuttut- ϕ -t γ i
 cut off-3sg.-breast
 He is a person with excised breast(s).
- (10) mam-pun-t γ i-pu!
 3sg.-3pl.-breast-wash
 He washed their breasts.

A dubitative particle /ya/ may be suffixed to any of the morpheme final phonemes asserted by our rule to trigger the alternation. However, the alternation does not take place. Thus we have:

- (11) putput-ya
 pregnant-DUB
 "Pregnant, perhaps?"

rather than the expected *putputt γ a. The rule must be further modified to exclude the /y/ of /ya/, as follows:

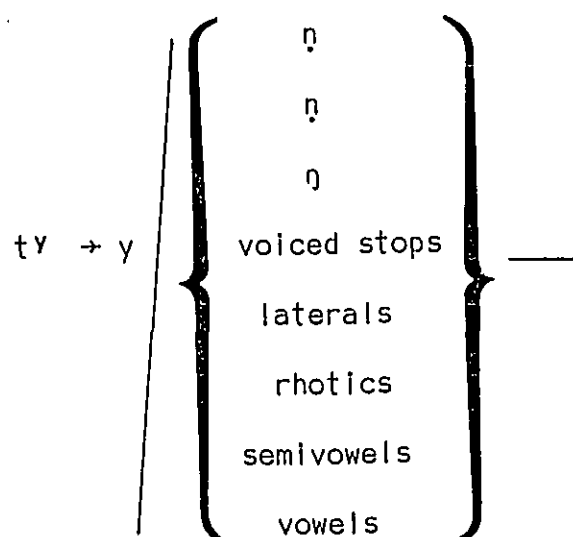
$$y \rightarrow t\gamma \left/ \begin{array}{l} m \\ n \\ \text{voiceless stops} \end{array} \right\} + \text{---} X$$

Condition: $X \neq a \#$ where $\#$ = word boundary.

The condition will suffice since /ya/ when suffixed always appears word finally.

The alternative, leniting rule would involve a complicated

environment:



Apart from the fact that many of these environments in fact never occur we would have to further specify the environment so as to ensure that many occurrences of t^y occurring in the above environment which do not change to /y/ were not subject to the application of the rule.

It can be seen in (7) that there is also an alternation between /m/ and /n^y/. So we will need two rules, one which accounts for the alternation of /m/ and /n^y/ and one to account for the alternation of /y/ and /t^y/.

The latter rule may be of two forms:

$$\begin{array}{l} y \rightarrow t^y / X ___ Y \\ t^y \rightarrow y / X' ___ Y' \end{array}$$

The first type is used since there is an alternation just for the environments stated and these environments are more easily statable than the environments for the

second type. (6), (7) and (10) illustrate this alternation:

$$y \rightarrow t^y / \left\{ \begin{array}{c} m \\ n \end{array} \right\} \text{---}$$

(8) and (9) illustrate part of a more general process:

$$y \rightarrow t^y / \text{voiceless stops } \text{---}$$

These two emerging rules can be linked by the braces convention:

$$y \rightarrow t^y / \left\{ \begin{array}{c} m \\ n \\ \text{voiceless stops} \end{array} \right\} \text{---}$$

This rule needs further specification since there are a few instances of intramorphemic /ny/ clusters in the corpus. These can be eliminated by specifying that the rule operates across a morpheme boundary:

$$y \rightarrow t^y / \left\{ \begin{array}{c} m \\ n \\ \text{voiceless stops} \end{array} \right\} + \text{---}$$

In terms of features our hardening rule is fairly simply statable as:

$$[- \text{ CONSONANTAL}] \rightarrow [- \text{ VOICE}] / \left\{ \begin{array}{l} [- \text{ VOICE}] \\ [+ \text{ NASAL}] \\ [- \text{ HIGH}] \end{array} \right\} + \left[\begin{array}{l} \text{---} \\ - \text{ PERIPHERAL} \\ - \text{ APICAL} \end{array} \right] X$$

Condition: $X \neq a \#$ (where $\#$ = word boundary).

Applying this tentative rule to the underlying form for (7) viz. mam-yi-pu! we have *mam^yipu!.

There is still need for a rule which assimilates /m/ to the following stops. Such a rule might look like this:

$$m \rightarrow n^y / \text{---} + t^y$$

These two rules applied in turn would derive the correct form: man^yt^yipu!. However since we have forms such as namam-t^yim

2sg.talk-2sg. sit

"you are sitting, talking" we will have to stipulate that the rule, $m \rightarrow n^y / \text{---} + t^y$, only operates when it is "fed" (see Kiparsky [1968]) by the rule:

$$y \rightarrow t^y / \left\{ \begin{array}{l} m \\ n \\ \text{voiceless stops} \end{array} \right\} + \text{---} X$$

Now, with this extra condition, the rules will generate just those forms which can occur but the disadvantage is that we now have a condition on a rule which checks on the derivational history of a form which could be a possible input for that rule. To avoid this we can

An additional simplification is that there is no longer any need for an ordering relation between the rules.

An exception to these rules is the alternation of /m/ to /n^y/ before /t^y/ occurring in the verb root /t^yir/ "sweat". We have these forms:

- (12) dem-ŋi-t^yir
 3sg.-1sg.-sweat
 "I'm sweating"
- (13) *dem-ø-t^yir → den^yt^yir
 3sg.-3sg.-sweat
 "He's sweating"

The rules would generate *demt^yir but they are retained since this appears to be the only exception.

2.1.10.4 Another widespread alternation is that between /y/ and /n^y/. The forms below exemplify this alternation:

- (14) dam-ŋi-yelelel
 3sg.-1sg.-irritate
 "I have something irritating my skin"
- (15) dam-ŋi-yer
 3sg.-1sg.-itch
 "I'm itchy"

- (16) dam- ϕ -n^yeieiei
 3sg.-3sg.-irritate
 "He has something irritating his skin"
- (17) dam- ϕ -n^yer
 3sg.-3sg.-itch
 "He's itchy"

Once again a decision must be made between a rule of the form

$$y \rightarrow n^y / X \text{ ______ } Y$$

and

$$n^y \rightarrow y / X' \text{ ______ } Y'$$

The former type of rule is adopted for reasons similar to those posited above for the morphophonological rules: the conditioning environment for the rule is more simply stated and refers only to combinations of segments which do occur.

The rule may be stated, taking into account that the alternation also occurs after /n/ as

$$y \rightarrow n^y / \left[\begin{array}{c} m \\ n \end{array} \right] \text{ ______ }$$

Since there are a few instances of the intramorphemic cluster /ny/ we need to specify that the alternation occurs only across morpheme boundaries. Also, to

exclude the dubitative particle, /ya/, it is necessary to put a condition on the preliminary form of the rule*. Incorporating these extra conditions, we have:

$$y \rightarrow n^y / \left[\begin{array}{c} m \\ n \end{array} \right] + \text{---} X$$

Condition $X \neq a \#$

The problem here is that we now have rules which change /y/ either to /t^y/ or /n^y/ in the same environment. However it is certainly the case that some instances of underlying /y/ are changed only to /t^y/ and not to /n^y/ while other instances are changed only to /n^y/ and not to /t^y/. Thus we have:

- (18) mamɣiyipu!
 "He washed my breasts"

- (19) manɣtɣipu!
 "He washed her breasts"

but not

- (20) * mamnɣipu!
 "He washed her breasts"

This form in fact means "He washed you"

* Alternatively, /-ya/ could be added after the phonological rules had applied.

palgun	-	te
woman	-	ERG
kigayyi	-	Je
youth	-	ERG

/-Je/ occurs after nominals whose final consonant is a vowel or a semivowel ie. segments characterised as [- CONSONANTAL] while /-te/ occurs after nominals ending in a stop, a nasal, a lateral or a rhotic ie. segments which are [+ CONSONANTAL]. However, this is not quite true since stems ending in /r/ may have either /-te/ or /-Je/. So for segments which are [+ H.S.P.] the alternants are in free variation but not so for segments which are [- H.S.P.]. Informally the alternation could be captured by the expression:

$$\begin{array}{l}
 \text{J} \rightarrow \text{t} \left\{ \begin{array}{l} \text{stops} \\ \text{nasals} \\ \text{laterals} \\ \text{non-trilled rhotics} \end{array} \right\} \text{--- e \#} \\
 \text{or } \text{J} \rightarrow \text{t} \left[\begin{array}{l} + \text{ CONSONANTAL} \\ - \text{ H.S.P.} \end{array} \right] \text{--- e \#}
 \end{array}$$

The reasons for choosing /Je/ as the underlying form will become clear when two other alternations involving /J/ are discussed.

2.1.10.6 There is an alternation between /m/ and /n/ illustrated in the following examples:

- (21) mam-ŋi-ɹi-pu!
3sg.-1sg.-buttocks-wash
"He washed my buttocks"
- (22) man-ø-di-pu!
3sg.-3sg.-buttocks-wash
"He_i washed his_j buttocks"
- (23) mam-ŋi-daɹi-pu!
3sg.-1sg.-back-wash
"He washed my back"
- (24) man-ø-aɹi-pu!
3sg.-3sg.-back-wash
"He_i washed his_j back"
- (25) mam-ŋi-tarmu-pu!
3sg.-1sg.-lower leg- wash
"He washed my lower leg"
- (26) man-ø-tarmu-pu!
3sg.-3sg.-lower leg- wash
"He_i washed his_j lower leg"

In (21), (23) and (25) /mam-/ represents 3rd person singular pronominal incorporated subject while in (22), (24) and (26) this is represented by /man-/.

A rule of the form:

$$m \rightarrow n \quad / \quad - \begin{Bmatrix} \text{J} \\ d \\ t \end{Bmatrix}$$

will generate the appropriate forms. Suppose the suffix, /-te ~ Je/, is added to a stem ending in /m/. According to the rule as it stands the initial /t/ or /J/ of the suffix will trigger an alternation from underlying /m/ to /n/. However, this is not the case since we have forms such as:

ku bamam-te
 NC:meat white-ERG
 "white man-ERG"

but not *ku bamante.

We propose to order the rule:

$$J \rightarrow t \quad / \quad \begin{Bmatrix} + \text{ CONSONANTAL} \\ - \text{ H.S.P. } \end{Bmatrix} \quad \text{---} \quad e \#$$

before this rule thus bleeding the environment of /J/ but feeding it with /t/'s. Then a condition is needed for the rule which says that it does not operate if the conditioning /t/ belongs to /te/. Thus the rule in modified form is:

$$m \rightarrow n \quad / \quad \text{---} \quad \begin{Bmatrix} J \\ d \\ tY \end{Bmatrix}$$

Condition: Y $\neq$ e #

2.1.10.7 It can be seen from (22) that an additional rule is needed to account for the alternation of /ɹ/ and /d/ in the morpheme meaning "buttocks". Such a rule might look like this:

$$\text{ɹ} \rightarrow \text{d/n} \text{ ___}$$

Thus the derivation would look like this:

mam- ϕ -ɹi-pu!

man- ϕ -ɹi-pu!

man- ϕ -di-pu!

The alternation could be viewed then as a simultaneous change in two segments. Such a change we have already seen can be simply stated by a rule in transformational format:

$$\text{m } \text{ɹ} \Rightarrow \text{n } \text{d}$$

However we will continue for the moment in a non-transformational format.

2.1.10.8 From (23) and (24) it can be seen that another rule is required to account for the alternation in the morpheme for "back". A rule such as

$$\text{d} \rightarrow \phi / \text{n} + \text{ ___}$$

would account for this alternation. It is necessary for this rule to specify that it operates across

morpheme boundaries since there are attested cases of the intramorphemic cluster, /nd/, which does not reduce to /n/ as predicted by the rule. The derivation for "He_i washed his_j back" is as follows:

mamdaɪpu!

mandaiɪpu!

manaiɪpu!

2.1.10.9 Let us now look at the proposed rules for alternations involving apical segments:

$$(a) \quad \text{ɹ} \rightarrow \text{t} \quad \left\{ \begin{array}{l} \text{stops} \\ \text{nasals} \\ \text{laterals} \\ \text{non-trilled rhotics} \end{array} \right\} \text{--- e \#}$$

$$(b) \quad \text{m} \rightarrow \text{n} \quad \left\{ \begin{array}{l} \text{ɹ} \\ \text{d} \\ \text{tY} \end{array} \right\}$$

Condition: Y ≠ e #

$$(c) \quad \text{ɹ} \rightarrow \text{d} / \text{n} \text{---}$$

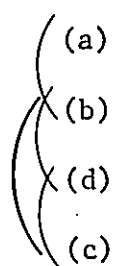
$$(d) \quad \text{d} \rightarrow \phi / \text{n} + \text{---}$$

We have already seen that we need an ordering relation between (a) and (b). Now (b) is in a feeding relationship with (c) and (d) and so must be ordered before them. We also need to order (c) and (d). The ordering must

produce a bleeding relationship by having (d) precede (c). If we do not (c) and (d) could as well be condensed to

$$j \rightarrow \phi / n + ___$$

since (c) would feed (d). Such a rule would produce the form *manipu! for "He_i washed his_j buttocks" which is wrong. Summing up the ordering for these four rules we have



2.1.10.10 Akin to (d) and to one of the alternations expressed in (b) is the alternation illustrated by these examples:

(27) mam-ŋi-ɖi-pu!
3sg.-1sg.-tooth-wash
"He washed my teeth"

(28) maŋ-ϕ-i-pu!
3sg.-3sg.-tooth-wash
"He_i washed his_j teeth"

2.1.10.11 Akin to part of (b) viz. $m \rightarrow n / ___ +d$ is the alternation of /m/ and /n/ shown in (27) and (28). This

alternation could be captured by an analogous rule of this form:

$$m \rightarrow \eta / __ \dot{d}$$

Then, to account for the final form in (28) we need a rule analogous to (d):

$$\dot{d} \rightarrow \phi / \eta + __$$

This rule is fed by the rule $m \rightarrow \eta / __ \dot{d}$ thus it is ordered after it. Once again it would be possible to express the two simultaneous changes in one transformational rule informally stated as:

$$m + \dot{d} \Rightarrow \eta$$

2.1.10.12 An alternation between / η / and / $\dot{d}$ / occurs in forms such as these:

- (29) pa- $\dot{d}$ u $\dot{d}$ i-nu
 3sg.- put on -FUT
 "She will put (it) on"

- (30) ban- η u $\dot{d}$ i
 3sg.- put on
 "She put it on"

It is simplest to set up the underlying segment as / $\dot{d}$ / and devise a rule which converts it to / η / when preceded by /n/ ie.

$\underset{\cdot}{d} \rightarrow \underset{\cdot}{n} / n \text{ ____}$

2.1.10.13 The alternation between /b/ and /m/ is exemplified by these forms:

(31) mam-ŋi-be-pu!
3sg.-1sg.-arm-wash
"He washed my arm"

(32) pan-ŋi-baɖ
3sg.-1sg.-hit
"He hit me"

(33) mam-ϕ-e-pu!
3sg.-3sg.-arm-wash
"He_i washed his_j arm"

(34) pan-ϕ-maɖ
3sg.-3sg.-hit
"He hit him"

The alternation can be most simply treated by setting up an underlying /b/ and devising rules which derive the appropriate forms. Two rules will accomplish this:

$b \rightarrow \phi / m + \text{ ____}$

which is analogous to $\underset{\cdot}{d} \rightarrow \phi / n + \text{ ____}$ and $\underset{\cdot}{d} \rightarrow \phi / \underset{\cdot}{n} + \text{ ____}$; and the other rule is:

$b \rightarrow m/n + \text{ ____}$

which is analogous to

$$\underset{\cdot}{d} \rightarrow \underset{\cdot}{n} / n + \underline{\quad}$$

The generalisation seems to be that a voiced stop is deleted following a homorganic nasal and converted to a homorganic nasal when following /n/.

2.1.10.14 Yet another rule is required for the reduction of identical contiguous nasals at a morpheme boundary. These forms illustrate this phenomenon:

- (35) mam-ŋi-me-pu!
3sg.-1sg.-foot-wash
"He washed my foot"
- (36) pu-na-baḍ-nu
3sg.-3sg.BENEF.-hit-FUT.
"He_i will hit him_j for him_k"
- (37) mam-ø-e-pu!
3sg.-3sg.-foot-wash
"He_i washed his_j foot"
- (38) pan-a-baḍ
3sg.-3sg.BENEF-hit
"He_i hit him_j for him_k"

Now in these examples I have deleted underlying segments from particular morphemes: in fact it would not of

course be possible to decide which segment had been deleted, in (38), for example, the /n/ of /pan/ or the /n/ or /na/. That it is to say there is no way of deciding between the two sets of rules:

$$m \rightarrow \phi \quad / \quad m + \underline{\quad}$$

$$n \rightarrow \phi \quad / \quad n + \underline{\quad}$$

and $m \rightarrow \phi \quad / \quad \underline{\quad} + m$

$$n \rightarrow \phi \quad / \quad \underline{\quad} + n$$

The issue can be left open by adopting the neighbourhood convention wherein the environment bar is dispensed with [Harms: 1968, 66-67], [Bach, 1968] and the rule simply states that one of two contiguous identical high nasals is deleted:

$$m \rightarrow \phi \quad / \quad m$$

$$n \rightarrow \phi \quad / \quad n$$

2.1.10.A Unsimplified* List of Rules

- (1) w → p / m ____
- (2) w → p / n ____
- (3) y_1 → t^y / m + ____ X Condition: X ≠ a #
- (4) y_1 → t^y / n + ____ X
- (5) y_1 → t^y / voiceless stops ____ X
- (6) m → n^y / ____ Condition: (6) only if (2)
- (7) y_2 → n^y / m + ____ X Condition: X ≠ a #
- (8) y_2 → n^y / n + ____ X
- (9) ɹ → t / stops + ____ e #
- (10) ɹ → t / nasals + ____ e #
- (11) ɹ → t / laterals + ____ e #
- (12) ɹ → t / non-trilled rhotics + ____ e #
- (13) m → n / ____ ɹ
- (14) m → n / ____ d
- (15) m → n / ____ tY Condition: Y ≠ e #
- (16) m → η / ____ d
- (17) d → ϕ / n + ____
- (18) d → ϕ / η + ____
- (19) d → η / n + ____
- (20) ɹ → d / n + ____
- (21) b → ϕ / m + ____
- (22) b → m / n + ____
- (23) m → ϕ / m
- (24) n → ϕ / n

* rules which have used labels for classes of sounds such as "laterals" are less simplified than those which only involve single segments. However for the purposes of this exercise we will allow such rules in the list.

2.1.10.15 These changes are expressed by many rules which are partly similar. It is therefore possible, and is certainly desirable for the simplicity of the overall grammar, to link partly similar rules. (1) and (2) may be combined to give

$$w \rightarrow p / \left[\begin{array}{c} m \\ n \end{array} \right] \text{ --- }$$

and similarly rules (3), (4), (5):

$$y_1 \rightarrow t^y / \left\{ \begin{array}{c} m \\ n \\ \text{voiceless stops} \end{array} \right\} + \text{ --- } X \text{ Condition: } X \neq a \#$$

The whole list could be summarised like this; below the numbered braces convention is used [Harms: 1968:59] in (8)', (10)' and (11)'

$$(1)' \quad w \rightarrow p / \left[\begin{array}{c} m \\ n \end{array} \right] \text{ --- }$$

$$\left(\begin{array}{l} (2)' \quad y_1 \rightarrow t^y / \left\{ \begin{array}{c} m \\ n \\ \text{voiceless stops} \end{array} \right\} + \text{ --- } X \text{ Condition: } X \neq a \# \\ (3)' \quad m \rightarrow n^y / \text{ --- } t^y \text{ Condition: } (3)' \text{ only if } (2)' \end{array} \right.$$

$$(4)' \quad y_2 \rightarrow n^y / \begin{bmatrix} m \\ n \end{bmatrix} + \text{---} X \quad \text{Condition: } X \neq a \#$$

$$(5)' \quad \text{J} \rightarrow t \left\{ \begin{array}{l} \text{stops} \\ \text{nasals} \\ \text{laterals} \\ \text{non-trilled rhotics} \end{array} \right\} + \text{---} e \#$$

$$(6)' \quad m \rightarrow n \mid \text{---} \begin{bmatrix} \text{J} \\ d \\ tY \end{bmatrix} \quad \text{Condition: } Y \neq e \#$$

$$(7)' \quad d \rightarrow \phi / n + \text{---}$$

$$(8)' \quad \underset{1}{\underset{1}{\begin{bmatrix} \phi \\ n \end{bmatrix}}} \rightarrow \underset{1}{\underset{1}{\begin{bmatrix} n \\ n \end{bmatrix}}} + \text{---}$$

$$(9)' \quad \text{J} \rightarrow d / n + \text{---}$$

$$(10)' \quad b \rightarrow \underset{1}{\underset{1}{\begin{bmatrix} \phi \\ m \end{bmatrix}}} / \underset{1}{\underset{1}{\begin{bmatrix} m \\ n \end{bmatrix}}} + \text{---}$$

$$(11)' \quad \underset{1}{\underset{1}{\begin{bmatrix} m \\ n \end{bmatrix}}} \rightarrow \underset{1}{\underset{1}{\begin{bmatrix} \phi \\ n \end{bmatrix}}} + \text{---}$$

This list is a considerable improvement for the grammar since we now have eleven rules and six ordering relationships whereas before we had twenty four rules and eight ordering relationships. However there are many other ways of simplifying the original list and

capturing significant generalisations. Rules (17), (18), (21) are very similar:- they concern the deletion of a voiced stop following its homorganic nasal. These three rules could be summarised by the expression:

$$\begin{pmatrix} b \\ d \\ \vdots \\ d \end{pmatrix}_1 \rightarrow \phi / \begin{pmatrix} m \\ n \\ \vdots \\ n \end{pmatrix}_1 + _$$

Rules (19) and (22) are also very similar. They state that certain voiced stops become nasals when following /n/:

$$\begin{pmatrix} b \\ d \\ \vdots \\ d \end{pmatrix}_1 \rightarrow \begin{pmatrix} m \\ n \\ \vdots \\ n \end{pmatrix}_1 / n + _$$

An analogous change for /d/ after /n/ would appear as:

$$d \rightarrow n / n + _$$

Now, if such a rule were applied the geminate cluster /nn/ would be reduced by (24) to /n/, provided the rule was ordered before (24).

A more general statement to account for all these changes is: a voiced stop becomes a nasal when following a homorganic nasal or /n/. The geminate nasal clusters which result from the application of this

rule would be reduced by the already existing rules (23) and (24) together with a new rule which reduces geminate retroflex nasal clusters.

$$\underset{\cdot}{n} \rightarrow \emptyset / \underset{\cdot}{n}$$

This rule can be combined with (23) and (24) and then ordered after the new rule for the nasalisation of voiced stops:

$$\left(\begin{array}{c} \left\{ \begin{array}{c} b \\ d \\ \underset{\cdot}{d} \end{array} \right\} \\ 1 \quad \quad 1 \end{array} \right) \rightarrow \begin{array}{c} \left\{ \begin{array}{c} m \\ n \\ \underset{\cdot}{n} \end{array} \right\} \\ 1 \quad \quad 1 \end{array} \quad / \quad \left\{ \begin{array}{c} \left\{ \begin{array}{c} m \\ n \\ \underset{\cdot}{n} \end{array} \right\} \\ 1 \quad \quad 1 \end{array} \right\} \begin{array}{c} + \\ - \end{array}$$

$$\left(\begin{array}{c} \left\{ \begin{array}{c} m \\ n \\ \underset{\cdot}{n} \end{array} \right\} \\ 1 \quad \quad 1 \end{array} \right) \rightarrow \emptyset / \begin{array}{c} \left\{ \begin{array}{c} m \\ n \\ \underset{\cdot}{n} \end{array} \right\} \\ 1 \quad \quad 1 \end{array}$$

These two rules do the work of (17) to (19) and (21) to (24).

By bracketing different rules different generalisations may be captured. For example, (14) and (16) together make the point that a bilabial nasal is assimilated to a homorganic nasal when followed by an apical voiced stop.

$$m \rightarrow \begin{array}{c} \left\{ \begin{array}{c} n \\ \underset{\cdot}{n} \end{array} \right\} \\ 1 \quad \quad 1 \end{array} / \quad - \quad \begin{array}{c} \left\{ \begin{array}{c} d \\ \underset{\cdot}{d} \end{array} \right\} \\ 1 \quad \quad 1 \end{array}$$

However this statement, true as it is, cuts across the generalisation made by (6)'. What emerges from such "clashes" as these is the fact that there is a degree of arbitrariness in what the 'final' simplified list of morphophonemic rules will look like.

It is intended to give a final list and then state these rules in terms of distinctive features. The purpose of the discussion above has been to indicate that this is only one of many such lists which could be compiled.

2.1.10.16 Transformational Rules.

We have already seen that (3) and (6) can be combined as one transformational rule. Similarly (13) and (20) can be combined:

$$m \quad \text{ɹ} \Rightarrow n \quad d$$

but this does not greatly simplify the grammar since there are instances of an underlying /n/ appearing before an underlying /ɹ/ and this /ɹ/ obligatorily changes to /d/. So we still need a rule:

$$\text{ɹ} \rightarrow d / n + \underline{\quad}$$

or to put it another way

$$n \quad \text{ɹ} \rightarrow n \quad d$$

Thus the only transformational rule to be adopted in our final summary will be that combining (3) and (6). The value of this rule is that it avoids the condition which reviews the derivational history.

2.1.10.17 Summary of Rules.

$$(1) \quad w \rightarrow p \left/ \begin{matrix} m \\ n \end{matrix} \right. + \text{---}$$

$$(2) \quad \begin{array}{cccc} \text{SD:} & m & + & y_1 & X \\ & 1 & 2 & 3 & 4 \end{array}$$

$$\rightarrow \text{SG:} \quad n^y \quad 2 \quad t^y \quad 4$$

$$(3) \quad y_1 \rightarrow t^y \left/ \begin{matrix} \text{voiceless stops} \\ n \end{matrix} \right. + \text{---} \quad X$$

Condition: $X \neq a \#$

$$(4) \quad y_2 \rightarrow n^y \left/ \begin{matrix} m \\ n \end{matrix} \right. + \text{---} \quad X$$

$$(5) \quad \text{J} \rightarrow t \left\{ \begin{array}{l} \text{stops} \\ \text{nasals} \\ \text{laterals} \\ \text{non-trilled rhotics} \end{array} \right\} + \text{---} e \#$$

$$(6) \quad m \rightarrow \left\{ \begin{matrix} n \\ \eta \end{matrix} \right\} \left/ \begin{matrix} \text{---} \\ \text{---} \end{matrix} \right. + \left\{ \begin{matrix} \text{J} \\ d \\ t^y \\ d \end{matrix} \right\}$$

Condition: $Y \neq e \#$

10

9

- 5 6
- (7) $b \rightarrow m / \begin{bmatrix} m \\ n \end{bmatrix} + ______$
- (8) $\dot{d} \rightarrow \dot{n} / n + ______$
- (9) $\begin{bmatrix} d \\ d \\ 1 \end{bmatrix}_1 \rightarrow \phi / \begin{bmatrix} n \\ n \\ 1 \end{bmatrix}_1 + ______$
- (10) $j \rightarrow d / n + ______$
- (11) $\begin{bmatrix} m \\ n \\ 1 \end{bmatrix}_1 \rightarrow \phi / \begin{bmatrix} m \\ n \\ 1 \end{bmatrix}_1$

2.1.10.18 Morphophonological Rules in Feature Format.

$$(1) \quad [- \text{CONSONANTAL}] \rightarrow [- \text{VOICE}] / \begin{bmatrix} + \text{NASAL} \\ - \text{HIGH} \end{bmatrix} + \begin{bmatrix} ______ \\ + \text{PERIPHERAL} \\ - \text{HIGH} \end{bmatrix}$$

$$(2) \quad \text{S.D.:} \quad \begin{bmatrix} + \text{NASAL} \\ + \text{PERIPHERAL} \\ - \text{HIGH} \\ 1 \end{bmatrix} \quad 2 \quad \begin{bmatrix} - \text{SYLLABIC} \\ - \text{CONSONANTAL} \\ - \text{PERIPHERAL} \\ 3 \end{bmatrix} \quad 4 \quad X$$

$$\rightarrow \text{S.C.:} \quad \begin{bmatrix} - \text{PERIPHERAL} \\ - \text{APICAL} \\ + \text{HIGH} \\ 1 \end{bmatrix} \quad 2 \quad \begin{bmatrix} - \text{PERIPHERAL} \\ - \text{APICAL} \\ - \text{VOICE} \\ 3 \end{bmatrix} \quad 4$$

Condition: $X \neq a \#$

$$(3) [- \text{CONSONANTAL}] \rightarrow \left[\begin{array}{c} + \text{CONSONANTAL} \\ - \text{VOICE} \end{array} \right] /$$

$$\left[\begin{array}{c} - \text{VOICE} \\ + \text{NASAL} \\ + \text{APICAL} \\ - \text{HIGH} \end{array} \right] + \left[\begin{array}{c} \text{---} \\ - \text{SYLLABIC} \\ - \text{PERIPHERAL} \end{array} \right] \text{ X}$$

Condition: X $\neq$ a #

$$(4) [- \text{CONSONANTAL}] \rightarrow [+ \text{NASAL}] /$$

$$\left[\begin{array}{c} + \text{NASAL} \\ - \text{HIGH} \end{array} \right] + \left[\begin{array}{c} \text{---} \\ - \text{PERIPHERAL} \\ - \text{APICAL} \end{array} \right] \text{ X}$$

Condition: X $\neq$ a #

$$(5) [+ \text{SONORANT}] \rightarrow [- \text{VOICE}] /$$

$$\left[\begin{array}{c} + \text{CONSONANTAL} \\ - \text{H.S.P.} \end{array} \right] + \left[\begin{array}{c} \text{---} \\ - \text{NASAL} \\ + \text{APICAL} \\ - \text{HIGH} \\ - \text{LATERAL} \end{array} \right] \left[\begin{array}{c} + \text{SYLLABIC} \\ + \text{FRONT} \\ + \text{LOW} \end{array} \right] \#$$

In the feature format (6) is divided into two rules:

$$(6) (a) \quad m \rightarrow n / \text{---} t \text{ Y}$$

Condition: Y $\neq$ e #

$$(6) (b) \quad m \rightarrow \left[\begin{array}{c} n \\ \dot{n} \end{array} \right]_1 / \text{---} + \left[\begin{array}{c} \text{---} \\ d \\ \dot{d} \end{array} \right]_1$$

$$(6) (a) \quad [- \text{APICAL}] \rightarrow [+ \text{APICAL}] /$$

$$\left[\begin{array}{c} \text{---} \\ + \text{NASAL} \\ - \text{HIGH} \end{array} \right] + \left[\begin{array}{c} + \text{APICAL} \\ - \text{HIGH} \\ - \text{VOICE} \end{array} \right] \quad \text{Y}$$

Condition: Y ≠ e #

$$(6) (b) \quad \left[\begin{array}{c} - \text{APICAL} \\ - \text{HIGH} \end{array} \right] \rightarrow \left[\begin{array}{c} + \text{APICAL} \\ \alpha \text{ HIGH} \end{array} \right] /$$

$$\left[\begin{array}{c} \text{---} \\ + \text{NASAL} \end{array} \right] + \left[\begin{array}{c} - \text{NASAL} \\ + \text{APICAL} \\ \alpha \text{ HIGH} \\ - \text{LATERAL} \\ \ddot{+} \text{VOICE} \\ - \text{H.S.P.} \end{array} \right]$$

$$(7) \quad \left[\begin{array}{c} - \text{SONORANT} \\ + \text{VOICE} \end{array} \right] \rightarrow [+ \text{NASAL}] /$$

$$\left[\begin{array}{c} + \text{NASAL} \\ - \text{HIGH} \end{array} \right] + \left[\begin{array}{c} \text{---} \\ - \text{APICAL} \\ - \text{HIGH} \end{array} \right]$$

$$(8) \begin{bmatrix} - \text{SONORANT} \\ + \text{VOICE} \end{bmatrix} \rightarrow [+ \text{NASAL}] /$$

$$\begin{bmatrix} + \text{NASAL} \\ + \text{APICAL} \\ - \text{HIGH} \end{bmatrix} + \begin{bmatrix} \text{---} \\ + \text{APICAL} \\ + \text{HIGH} \end{bmatrix}$$

$$(9) [- \text{SONORANT}] \rightarrow \phi / \begin{bmatrix} + \text{NASAL} \\ + \text{APICAL} \\ \alpha \text{ HIGH} \end{bmatrix} + \begin{bmatrix} \text{---} \\ + \text{APICAL} \\ \alpha \text{ HIGH} \end{bmatrix}$$

$$(10) [+ \text{SONORANT}] \rightarrow [- \text{SONORANT}] /$$

$$\begin{bmatrix} + \text{NASAL} \\ + \text{APICAL} \\ - \text{HIGH} \end{bmatrix} + \begin{bmatrix} \text{---} \\ - \text{NASAL} \\ + \text{APICAL} \\ - \text{HIGH} \\ - \text{LATERAL} \\ + \text{VOICE} \\ - \text{H.S.P.} \end{bmatrix}$$

$$(11) \begin{bmatrix} + \text{NASAL} \\ \alpha \text{ APICAL} \\ - \text{HIGH} \end{bmatrix} \rightarrow \phi / \begin{bmatrix} + \text{NASAL} \\ \alpha \text{ APICAL} \\ - \text{HIGH} \end{bmatrix}$$

(11) may be stated as:

$$(11)' \begin{bmatrix} + \text{NASAL} \\ \alpha \text{ PERIPHERAL} \\ - \text{HIGH} \end{bmatrix} \rightarrow \phi / \begin{bmatrix} + \text{NASAL} \\ \alpha \text{ PERIPHERAL} \\ - \text{HIGH} \end{bmatrix}$$

Note that rules (2), (3) and (4) do not recognize the fact that there are two underlying /y/'s: /y₁/ and /y₂/. I know of no suitable notation to capture this fact in the generative phonological framework.

These rules will be abbreviated as MP-1, MP-2 etc.

In the remainder of the description multimorphemic forms will be presented in underlying form unless otherwise stated. It is a simple matter to convert such forms into their surface forms by applying the rules.

2.2 Suprasegmental Phonology.

2.2.1 Syllables.

An examination of a large number of words indicates that there are three prevalent syllable types:

CV

CVC

CVCC

eg. /ba/ "wasp"; /mɛl/ "sandfly"; /merk/ "moon". These three syllable types can be combined in any order, for non-monosyllabic words.

Syllable boundaries then can be assigned to any word in a simple way. Syllable boundaries are placed at word boundaries by this rule:

(a) $\phi \rightarrow \cdot / \#$

where # = word boundary and . = syllable boundary.

Syllable boundaries, within the word, are then assigned by a rule which puts a syllable boundary before any CV:

(b) $\phi \rightarrow . / \text{---} \text{CV}$

Thus a string such as:

(39) kelet^ykelet^ywunkudininda
 "they two non-sibling males are adept at learning
 languages"

is assigned syllable boundaries as follows:

.kelet^ykelet^ywunkudininda. by (a)

.ke.let^y.ke.let^y.wun.ku.ḍi.nin.da by (b)

or walmbur

"testicles"

by (a) becomes .walmbur.

by (b) .walm.bur.

The exceptions to the three syllable types stated, CV(C)(C), are all of the form, V, and occur in these words:

a "or" (perhaps a loan from English)

awu "no"

apepe "dumb; unable to speak"

The two syllable boundary rules (SBR) are abbreviated as

SBR-1 for (a) above and SBR-2 for (b).

2.2.2 Stress

2.2.2.1 Stress is not entirely predictable in MuJinypata but is subject to a few simply stated tendencies.

The basic pattern is covered by the expression:

$$(SU)^n (S) \text{ for } n \geq 0$$

where S indicates a stressed syllable and U an unstressed syllable. From this formula it can be seen that monosyllabic words are stressed, then two syllabled words have the pattern SU
 three SUS
 four SUSU
 five SUSUS
 etc.

ie. there is an alternation of stressed and unstressed syllables. Now we turn to the less usual pattern.

If the first syllable of a two or more syllabled word is unstressed we may still have an alternation of stressed and unstressed syllables like this:

for a two syllabled word the pattern is US

three	USU
four	USUS
five	USUSU
etc.	

There is an important difference: in this pattern words with an odd number of syllables now have less stressed syllables than unstressed syllables. However the preferred pattern in Mujinypata is for any word with an even number of syllables to have the same number of stressed syllables as unstressed; the less usual pattern is for the word to have one extra stressed syllable. For a word with an odd number of syllables the preferred pattern is to have one more stressed syllable than the number of unstressed syllables. The less preferred pattern is to have more unstressed than stressed syllables. For example the preferred pattern for an eight syllabled word is to have four stressed and four unstressed syllables while the less preferred but not very uncommon pattern is to have five stressed and three unstressed syllables. For a nine syllabled word the preferred pattern is five stressed and four unstressed with a less preferred pattern of four stressed and five unstressed syllables.

Here are a few examples which illustrate this basic pattern:

wéje	SU	"dog"
nígunú	SUS	"she"
kánaqándaŋ	SUSU	"emu"
kéletʔkéletʔdǐ	SUSUS	"fast voice"

However the most revealing way to exemplify stress in Mujinypata is through verb morphology since most verbs

are multimorphemic. The number of syllables for a verb can be altered one at a time by substitution of different morphemes in a given structural position.

In a word each morpheme tends to be stressed on its first syllable. In this way each morpheme (which has a phonological realisation) is marked by stress on the first syllable. Thus one would expect in a three syllabled word consisting of three morphemes, eg.

(40) pan-ŋi-baɖ
 3sg.-1sg.-hit

for there to be three stressed syllables: SSS

*pánŋibáɖ

However this does not occur because there is a constraint* on more than two contiguous stressed syllables. Also SSS contravenes the tendency to have an alternation between stressed and unstressed syllables. The stress pattern which actually occurs in SUS ie.

pánŋibáɖ

*The few exceptions result from morphemes with reduplicated stress.

as in dʏebdʏeb-ŋi-tayyi SSSUU
 food-1sg.-lip (?)
 "I'm greedy"

If "food" did not have inherent reduplicated stress we would expect SUSSU following the morphemic integrity tendency.

This pattern agrees with the tendency to have alternating stressed and unstressed syllables, the tendency to have more stressed syllables than unstressed syllables in a word with an odd number of syllables and has as many morphemes stressed on the first syllable as is feasible.

Let us consider now a five syllabled word:

- (41) ɲam-nʸi-lu-wewu
 1sg.-2sg.-forehead-pour (water) on
 "I poured water on your forehead"

Following the principle that each morpheme is stressed on its first syllable we would expect:

*ɲámɲííúwéwu SSSSU

This cannot occur because there cannot be more than two contiguous stressed syllables.

What actually occurs is:

ɲámɲííúwéwu SUSSU

Why does not SSUSU occur since this would break up the inadmissible sequence of four stressed syllables and would mark as many morphemes on the first syllables as the pattern which actually occurs? There appears to be another tendency which is to avoid having the first

two syllables of a word stressed.

If we consider another five syllabled word where the morpheme breaks occur in different places we get a different result:

- (42) η am- ϕ -tarmu-wewu
 1sg.-3sg.- lower leg - pour (water) on
 "I poured water on his lower leg"

If we have a stress on the first syllable of each morpheme we have:

* η ámtármuwéwu SSUSU

What actually occurs is:

η amtármuwéwu USUSU

This has the less preferred pattern of more unstressed syllables than stressed syllables but avoids having the first two syllables stressed.

2.2.2.2 What we see in the stress patterns of Mujinypata is a number of tendencies which act together to produce acceptable combinations. At this point let us summarise these tendencies.

Stress Rules.

- SR-1 Stress is assigned to the first syllable of
 as many morphemes as can be consistent with
 the other rules.
- SR-2 No more than two contiguous syllables may
 be stressed.
- SR-3 In any word the preferred pattern is for the
 number of stressed syllables to be equal to
 or greater than the number of unstressed syllables.
- SR-4 The preferred pattern is for stressed and
 unstressed syllables to alternate.
- SR-5 The preferred pattern is for one of the first
 two syllables to be unstressed and the other
 stressed.
- SR-6 The first syllable of the word is preferred
 to be stressed.

In this tentative set of rules, rule of quite different types have been lumped together. SR-1 and SR-2 are definite directives while the other four rules describe preferred patterns. SR-3,4,5,6 need not apply to any string but often do so unlike the morphophonemic rules which must always apply to appropriate inputs these rules summarise frequently occurring combinations.

They are not ordered with respect to each other; any one of the four may feed or bleed [Kiparsky 1968] the other two.

Note on SR-3.

The rule can be further refined. The preferred pattern for words with an even number of syllables is for there to be an equal number of stressed and unstressed syllables. The preferred pattern for words with an odd number of syllables is for the number of stressed syllables to be one more than the number of unstressed syllables.

SR-1 is quite different. It always applies first. The other five rules act as a filter on the output of SR-1 to produce an acceptable terminal output.

Consider this string, for example:

- (43) η am-n^yi-tarmu-tuk
 lsg.-2sg.-lower leg-put oil on.
 "I put oil on your lower leg"

The application of the constraints produces:

η ámnyítármu ^t úk	SSSUS	by SR-1
* η ámnyítármu ^t úk	SSSUS	by SR-2
η ámnyitármu ^t úk	SUSUS	by SR-4
		and SR-5
		and SR-6

SR-3 is not applicable.

A similar string with one less syllable gives a different pattern:

- (44) $\eta am-\phi-tarmu-tuk$
 lsg.-3sg.-lower leg-put oil on

Here the constraints give:

$\eta \acute{a}mt\acute{a}rmut\acute{u}k$	SSUS	SR-1
$\eta amt\acute{a}rmut\acute{u}k$	USUS	SR-4
		SR-5

If SR-6 were invoked the pattern would be SUUS but SR-4 would be contravened.

A string of the same number of syllables but a different morphemic composition produces different stress patterns indicating that morphemic structure and stress assignment are interlinked:

- (45) $\eta am-n^{\gamma}i-we-tuk$
 lsg.-2sg.-head-put oil on
 "I put oil on your head"

Applying the rules, we have:

$\eta \acute{a}mn^{\gamma}i\acute{w}\acute{e}t\acute{u}k$	SSSS	SR-1
$*\eta \acute{a}mn^{\gamma}i\acute{w}\acute{e}t\acute{u}k$	SSSS	SR-2
$\eta \acute{a}mn^{\gamma}i\acute{w}\acute{e}t\acute{u}k$	SUSU	SR-4
		SR-5
		SR-6

It should be pointed out that all six rules are necessary to derive the appropriate stress patterns.

If SR-1 were not significant then the other five rules would predict the pattern SUSU for

ḡamtarmutuk

The fact that ḡamtarmútuk is unacceptable is a reflection of the fact that only one of the three (phonologically overt) morphemes receives stress on its first syllable. SR-1 rules out the SUSU pattern and contributes to the correct output.

Assuming that SR-1 is adopted we need SR-2 to rule out unacceptable strings such as

*ḡámn'íwétúk SSSS

If there was not a rule such as SR-3 many of the unacceptable patterns would not be ruled out. In fact there are sixteen possible combinations of stressed and unstressed syllables for a four syllabled word (ie. 2⁴). Of these three (viz. SSSS, SSSU and USSS) are ruled out by SR-2 while SR-3 rules out five more (USUU, UUSU, UUUS, UUUU and SUUU). With the application of just two rules half the possibilities are ruled out. Rules, SR-4 and 5, tend to reject six other combinations leaving just SUSU and USUS. SR-1 and SR-6 then choose a unique stress pattern, SUSU, which is in fact the only one that occurs for that word.

This indicates that even though there is a certain amount of flexibility built into the statement of the stress rules a given word will require the use of all the rules.

Although the application of constraints just presented assigns a unique stress pattern for the word there can be ambivalence in stress patterns under certain conditions.

2.2.2.3 Where a morphophonemic change blurs the syllabic boundaries of morphemes SR-1 is less rigidly applied. In underlying form we have a verb which appears as:

- (46) mam- ϕ -dudud-qanam
 lsg.-3sg.-poke-lsg.HABITUATIVE
 (action with hand)
 "I habitually poke him with my hand"

By the morphophonemic rules this form is derived to become:

- mandududqanam MP-6
 manududqanam MP-9

Whether the /n/ of /manudud/ is an assimilation of /m/ from underlying /mam/ or an assimilation of /d/ from underlying /dudud/ is not non-arbitrarily decidable. The morphophonemic rules set up above (2.1.10.17) claim that the remaining /n/ is from /mam/. However even if

these morphemic divisions were decided upon, the syllabic patterning must be

ma.nu.dud.ŋa.nam by SBR-2

and it is the syllable on which stress falls or does not.

The stress pattern for ^ˈma^ˈnu^ˈdud^ˈŋa^ˈnam is ambivalent: either the blurred morphemic division is recognized and we get:

ma^ˈnu^ˈdud^ˈŋa^ˈnam USUSU

which accords with SR-1,2, SR-4,5, but not SR-3, SR-6, or it is not recognized and we get:

mánu^ˈdú^ˈdú^ˈŋá^ˈnam SUSSU

which accords with all the rules except SR-4. The preferred stress pattern for this form is in fact

SUSSU

This stress pattern marks the entry of all new morphemes which are clearly recognizable and has the preferred pattern of one extra stressed syllable for an odd syllabled word.

Predictably, when the morphemic division becomes clear there is no ambivalent stress pattern:

SUSUSU

- (47) mam-n^yi-dudud-ŋanam
 1sg.-2sg.-poke-1sg.HABITUATIVE*
 (action with hand)
 "I habitually poke you with my hand"

Another example illustrates the same point:

- (48) ŋam-ø-ma-d^yuŋ
 1sg.-3sg.-hand-kiss
 "I kissed her hand"

This underlying string of morphemes is realised as (by MP-11) ŋamad^yuŋ and the morphemic division between /ŋam/ and /ma/ is blurred. The preferred pattern is SUS. We also get USU which recognizes the morpheme /ma/. When /ma/ is easily recognizable it is stressed as in:

- (49) ŋa-ø-ma-d^yuŋ-nu
 1sg.-3sg.-hand-kiss-FUT
 "I will kiss her hand"

The preferred stress pattern here is USUS. If the future tense morpheme, /nu/, is deleted (as it often is) the stress pattern which is preferentially used is USU so that we have two homophonous forms with different preferred stress patterns determined by their morphemic composition:

*Henceforth abbreviated as HAB.

ŋámadʷún	SUS	I kissed her hand
ŋamáɖʷun	USU	I will kiss her hand

When an underlying morpheme "straddles" a syllable boundary ambivalence of stress assignment occurs. Consider for example the morphemic shape of the incorporated form for "face" or "eye": /ŋka/. Now we have seen in the section on syllables [2.2.1] that every syllable in Mujinypata is covered by the expression: CV(C)(C). When /ŋka/ appears in a word a part of the morpheme viz. /ŋ/ will appear in one syllable combined with a distinct morpheme while the other part of the morpheme viz. /ka/ appears in a separate syllable. Thus in a word such as leluwinʷŋiŋka "I'm beautiful", the morphemic divisions are as follows:

- (50) leluwinʷŋi-ŋka
beautiful-lsg.-face

but the syllabic divisions are:

le.lu.winʷ.ŋiŋ.ka (by SBR-2)

Applying SR-1 we have:

leluwinʷŋiŋká SUUSS

but SR-4 is invoked to give:

leluwinʷŋiŋká USUSS

Why isn't SR-6 invoked? The only reason I can suggest is that there is a pecking order in the rules. In fact the numbers which have been assigned to the rules seem to reflect the pecking order although more data are required before this can be established.

Consider a form such as:

- (51) $\eta a-n\acute{a}nku-\eta k\acute{a}m\acute{i}jekm\acute{i}jek-n\acute{u}$
 1sg.-2du.sib.-abuse without reaction-FUT
 "I'm going to abuse you two of the same
 subsection who will not react to that abuse
 (I predict)"

Now SR-4, SR-6 would predict for a nine syllabled word:

SUSUSUSUS

and this pattern does occur. This is surprising since the verb root is very likely tri-morphemic: $/\eta ka/$ and reduplicated $/mi\acute{e}k/$. If this were the case and SR-1 were followed throughout we would have:

SSUSSUSUS

This does not occur though because it violates SR-5. Instead we get a second pattern in free variation with the first:

$\eta a n \acute{a} n k u m \acute{i} j e k m \acute{i} j e k n \acute{u}$ USSUSUSUS

which recognizes all the morphemic boundaries except /ŋa/, also it follows SR-4 fairly closely and agrees with SR-3 (five stressed syllables in a nine syllabled word).

Why is the basic pattern followed when it fails to recognize in terms of stress either /nanku/ or /ŋka/? The best explanation from looking at this and other ambivalences in stress patterning is that when the morphemic divisions become unclear either through morphophonemic change or through a morpheme straddling a syllable boundary the language reverts to the basic pattern. With very few exceptions (eg. nukunu "he, it" SUS or USU) all instances of ambivalence in stress assignment arise from these two factors.

2.2.2.4 Further illustrations of stress placement.

- (52) ŋan-tújuwítʷ-tújuwítʷ-ŋánam
 lsg.-poke out anthill-poke out anthill-lsg.HAB
 "I habitually poked out anthills (with a stick)"

Number of syllables: 9

Pattern predicted by SR-1: SSUUSUUSU

Actual pattern: USUSSUSSU

Rules: SR-3, SR-4 and SR-5

- (53) nan-mba-tuɬuwitʸ-tuɬuwitʸ-nanam
 1sg.-2sg.BEN*poke-poke-1sg.HAB
 "I habitually poked out anthills (with
 a stick) for you"

Number of syllables: 10
 Pattern by SR-1: SSSUUSUUSU
 Actual pattern: SUSUSSUSSU
 Rules: SR-2, SR-4, SR-5

- (54) nan-naɬu-tuɬuwitʸ-tuɬuwitʸ-nanam
 1sg.-2du.sib.BEN-poke-poke-1sg.HAB
 "I habitually poke out anthills (with
 a stick) for you two of the same subsection"

Number of syllables: 11
 Pattern by SR-1: SSUSUUSUUSU
 Actual pattern: USUSUSSUSSU
 Rules: SR-3, SR-4, SR-5

- (55) nan-naɬu-tuɬuwitʸ-tuɬuwitʸ-ninda-nanam
 1sg.-2du.BEN-poke out anthill-poke out anthill-
 dual.fem-1sg.HAB
 "I habitually poked out anthills (with a stick)
 for you two at least one of whom is female"

Number of syllables: 13
 Pattern by SR-1: SSUSUUSUUSUSU
 Actual pattern: USUSUSSUSSUSU
 Rules: SR-3, SR-4, SR-5

- (56) gam-punku-ŋka-miɽek-miɽek-ninda-ŋanam
 lsg.-3du.-face-abuse-abuse-du.MASC-1sg.HAB
 "I habitually abused them two males (not
 of the same subsection) who did not react
 to the abuse"

Number of syllables: 12
 Pattern by SR-1: SSUSSUSUSUSU
 Actual pattern: USSUSSUSUSUSU
 Rules: SR-4, SR-5

2.2.2.5 Deviation from Norm Stress Pattern as a Diagnostic for Morpheme Cuts.

A very large proportion of words correspond to the basic stress pattern given by (2)(i) in [2.2.2.1]. However, in the course of the investigation, it has been found that some forms obligatorily deviate from this pattern. A four syllabled word has a basic pattern of SUSU however these forms must be USUS

tʲipinʲiɽe	"tomorrow"
kuɽiniɽe	"yesterday"

two time words of similar appearance are:

tʲipinʲi	"evening"
kuɽini	"afternoon"

Now there is a temporal suffix whose precise meaning is unclear /je/. In view of the stress deviation it might be argued that tʲipinʲje and kuɲinʲje are dimorphemic a fact recognized by the stress given to the /je/ syllable. This might have occurred diachronically and has now become frozen.

Likewise the stress pattern for /ŋkamiɲekmiɲek/: SSUSU would suggest that the verb root is trimorphemic and this would be supported by the fact that many other verb roots appear to have incorporated body parts which, with the basic verb root, have become frozen forms.

2.2.2.6 Stress and Intonation.

Two syllabled vocatives in Musinypata deviate from the basic stress pattern. The citation forms for "mother" and "father" for example are:

kale	SU	"mother"
yile	SU	"father"

but the vocatives are:

kale	US
yile	US

The stress on the final syllable is associated with a rise in intonation characteristic of vocatives.

Sentence Intonation.

Declarative sentences may be distinguished from interrogative sentences having the same segmental phonology by intonation. For example,

- (57) n^Yin^Yi-ka matar 
 2sg.-TOPIC ill
 "Are you ill?"

- (58) n^Yin^Yi-ka matar 
 2sg.-TOPIC ill
 "You are ill"

In narrative there is a characteristic device of lengthening out the final syllable of key words with an accompanying rise in intonation.

3. Word Classes.

Nine word classes with mutually exclusive membership can be established for Muɣinypata. These are:

Noun	}	Nominal
Noun-Classifier		
Pronoun		
Adjective		
Adverb		
Adjective/Adverb Qualifier		
Verb		
Particle		
Interjection		

The word classes are defined according to a number of criteria. Some word classes share characteristics but differ in at least one of the criteria.

This section will present the defining characteristics of the word classes and discuss the shared characteristics of some of the word classes. There is a brief account of the semantic content of the word classes with more detail later [6]. Most of the morphology will be left to the following chapter [4].

3.1 Nominal.

Nominals are characterised by the ability to appear with these suffixes [4.1.2]:

-te ~ ɬe*	ERGATIVE/INSTRUMENTAL
-nu	DATIVE

*Morphophonemic alternation is described in [2.10]

Nominals are treated in the description as appearing with an unmarked ABSOLUTIVE [4.1.2] suffix, $-\emptyset$ but this is of course not used as a distinguishing criterion.

These suffixes are accordingly called nominal inflections.

One example from each category of the class, nominal, appears in the examples:

palɣun	"woman"	NOUN
kaɖu	"person"	NOUN-CLASSIFIER
nukunu	"he"	PRONOUN
ɣala	"big"	ADJECTIVE

(59) palɣunɤ nukunu panbaɖ^{*}
"woman hit him"

(60) kaɖuɤ nukunu panbaɖ
"person hit him"

(61) nukunuɤ palɣun panbaɖ
"he hit woman"

(62) palɣun ɣalaɤ nukunu panbaɖ
"big woman hit him"

(63) kaɖuɤ nukunu panɣebaɖ palɣunnu
"person hit him for woman"

*Morphophonemic alternation [2.10]. More detailed glossing of verb forms [4.2].

- (64) palḡunḡe nukunu pannabaḡ kaḡunu
 "woman hit him for person"
- (65) palḡunḡe kaḡu pannabaḡ nukununu
 "woman hit person for him"
- (66) nukunuḡe kaḡu panḡebaḡ palḡun ḡalanu
 "he hit person for big woman"

3.1.1 Pronoun.

Pronouns form a closed system and may be defined by supplying an exhaustive listing [4.1.1].

3.1.2 Noun-Classifier.

Noun-Classifiers (abbreviated as NC) also form a closed system [3.9] but are further distinguished by the fact that they are negated by a special negative prefix, ma- [4.1.5]. An explanation is provided for the one apparent exception, ḡa, to this generalisation.

3.1.3 Adjective.

Adjectives are one of the two open classes of nominals. Adjectives may appear with intensifiers such as "very" and other qualifiers such as "a little", "too much" [3.2.2]. Pronouns may be cross-referenced to an adjective appearing as a suffix to the adjective root. Such pronouns appear in bound direct object form [4.2]. Thus as an alternative to:

- (67) nʏinʏi waɖi
 "you are thin"

where nʏinʏi is the free form for the second person singular pronoun, we have:

- (68) waɖinʏi

where the bound form pronoun appears as -nʏi. In the case of adjectives such pronominal suffixes behave as stem-forming affixes:

- (69) waɖinʏije nukunu tanbaɖ
 "you who are thin hit him"

For some adjectives body part nouns may appear as stem-forming suffixes to the adjective root [4.1.4.1]. Thus

- (70) nʏinʏi nitʏi waɖi
 "you are thin of arm / you have thin arms"

is alternatively expressed as

- (71) waɖinʏibe

where -be is the bound form for the body part noun "arm" which appears as nitʏi in free form.

- (72) waɖinʏibeje nukunu tanbaɖ
 "you who have thin arms hit him"

3.1.4 Nouns are also an open class and are negatively defined as those nominals which do not meet the criteria of the other nominals.

3.2 Other word classes.

3.2.1 Adverb.

All roots in the adverb class will be found in the class of adjectives although the converse is not the case. Adverbs are distinguished from adjectives by taking no affixes but are linked to them by their ability to appear with intensifiers and the other qualifiers mentioned for adjectives. Adverbs modify the action of a verb: every adverb has an homophonous counterpart which qualifies a noun (and is therefore an adjective). For example, tawayt^y appears either as an adjective, "slow" :
nindu tawayt^y "slow horse" or as an adverb

(73) ɲuɲunu tawayt^y
 "I will go slowly"

By contrast, waɖi, an adjective meaning "thin" has no adverbial counterpart.

3.2.2 Adjective/Adverb Qualifier.

This word-class is characterised by the necessity of its members to immediately follow the word it qualifies. This is unusual in Musinyata since although there are preferred word orderings there are no other words which must appear in a particular position [5].

This word class has few members - only five observed - but it is not really possible to say its membership is closed. The qualifiers are as follows:

3.2.2.1 dargini

This seems to mean something like "a little bit", "slightly", "rather", "somewhat" or some such.

- (74) kunuṅaṅka dargini
small "little bit"
"pretty small; fairly small"
- (75) paḷṅun muḷuwuṅka dargini
woman beautiful little-bit
"a not entirely unattractive woman"

3.2.2.2 ṅada "too much"

- (76) tungu taktakmam ṅada
fire(wood) wet too
"the firewood is too wet"
- (77) tʸu wembel yittʸit ṅada
NC: weapon type-of-club heavy too
"the club is too heavy"

3.2.2.3 taytpir "really" "very"

taytpir also appears as an adjective meaning "true" so that it is not unlike the English use of "truly" as an adjectival intensifier.

- (78) tamul nʸinʸi paṇḍuṭpan taytpir
 spear 2sg. light true
 "your spear is very/really light"

- (79) maḍinbuyi muḍuwulṇka taytpir
 girl(teenager) beautiful true
 "a very beautiful girl"

3.2.2.4 ṇala

This is another intensifier meaning "very";
 independently as an adjective ṇala means "big".

- (80) muḍinʸ pana-ka pata ṇala
 news that(near)-TOPIC "important"(good) big
 "that news is (very) important"

3.2.2.5 kunuṇaṇka

This word also appears as an adjective meaning
 "small", "little".. Its function as an
 adjective/adverb qualifier is essentially
 the same as darṇini.

- (81) niṭʸima bukmandar kunuṇaṇka
 shirt red little
 "a shirt the colour of which partakes to
 a limited extent of the quality of redness
 ie. a pink shirt".

Similarly

- (82) lawalima t'ipmam kunuŋaŋka
trousers black little
"grey trousers"

Likewise with other adjectives and adverbs it has the converse effect of ɲala in that it diminishes the quality denoted by the adjective or adverb:

- (83) tamul panguyyi kunuŋaŋka
spear long little
"a not particularly long spear"

- (84) gayi ɲuɲunu pitpit kunuŋaŋka
lsg lsg will move fast little
"I will not come overly quickly"

3.2.2.6

Note: Reduplication of a noun phrase containing an adjective can intensify the adjective.

- (85) kaɖu panguyyi kaɖu panguyyi
NC: man long NC: man long
"a very tall man"

- (86) palɒn muɲuwulŋka palɒn muɲuwulŋka
woman beautiful woman beautiful
"a very beautiful woman"

3.3 Criteria for Identification of a word.

It might be argued that a morpheme which obligatorily follows some other morpheme has a dubious status as a separate word. Why should it not be treated as a suffix?

There are three criteria involved in determining what is a word in Muɣinypata:

3.3.1 (1) Mobility.

In a string of discourse, those parts of the strings which are words may be permuted. Parts of words may not be permuted. Thus we have from (73):

(87) tawaytʸ ɣuɣunu

but not

(88) *ɣuɣunu waytʸta

(89) *ɣunu tawaytʸɣu

and so on.

3.3.2 (2) Isolability.

Native speakers readily isolate words and will discuss these in isolation but will not, or, are very reluctant to, isolate parts of words. Thus one may address a question to a native speaker of the form: "What does ɣuɣunu mean?" but not "What does ɣu mean?" although the latter question may be a reasonable one in the

context of the linguist's description of the language.

3.3.3 (3) Pausing.

In a string of discourse pauses can be noted between those parts of the discourse which are words but not those parts which are only parts of a word.

For the class of adjective/adverb qualifiers the second and third criteria are invoked. For all other word classes all three defining characteristics apply.

3.4 Verb.

It is sufficient to define a verb as a non-nominal which appears with cross-referenced pronominal affixes. Verbs have open membership.

3.5 Interjection.

Interjections form a word class with closed membership, and thus may be defined by an exhaustive listing. They have no syntactic function. Often they make up a complete utterance in themselves or otherwise commence an utterance: in any case they make up a sentence in themselves [5.1].

yuwu yes; registering attention to the addresser,
 similar to English "mm".

yukuwi yes; frequently but not always more emphatic
 than yuwu.

awu no

awuwuda* emphatic awu: No!!; certainly not!

yakay expresses sudden emotion, most often surprise mingled with joy (it is thus ideally suited to serendipitous situations) but sometimes surprise mingled with grief the difference being indicated by context and intonation - in this way it is similar to the considerably tamer English "golly!".

When expressing high emotion yakay, which is always stressed on the second syllable, lengthens out the second syllable.

batanu look out!; beware!

kuguk wait (a moment)!

beje it's finished; that's that; in narrative a sort of verbal pause like English "umm".

ya "I dont know"; a verbal shrug of the shoulders.

bejejun "that's right"; "you've got it (the message)"

ka rather like a verbal question mark. It could be paraphrased in English by "Eh?"; "What?" or perhaps non-verbally by interrogatively raised eyebrows.

*Alternatively this expression may be viewed as two words since a very definite pause is often heard between awu and wuda [3.3.3].

kama	"perhaps"; "maybe"; expression of uncertainty.
na	"that's right, isn't it?" strong expectation of a positive reaction.
ba	"excuse me"; "pardon me"; sometimes used to indicate deferential hesitancy (thus sometimes used by members of the maḍinbuy age-grade to the author).
kayi [kɔyi]	"come here!"
ma	"Oh!"
payi [pɔyi]	"go away!"
wakay	very similar to beje - this word is probably a loan into Muɟinypata from neighbouring Daly River Languages.

In Australia there are at least three interjections with wide geographical distribution [Dixon 1972:18-19]; two of these appear to be represented in Muɟinypata: yuwu related to yuwuy which is widespread throughout Australia. (It may turn out that yuwu is more similar than it appears when the precise phonetic value of yuwuy is known.); and yakay which is surely related to yagay.

ka and ya also occur as suffixes [4.6].

Two of the interjections are known to take the emphatic suffix, -ya, viz. kama and yakay so that we have:

kamayya (the final vowel of kama is diphthongized
by following y in a regular way)
yakayya

It is just feasible that kama, "perhaps", may be dimorphemic consisting of the interrogative interjection affix ka and the "having" suffix -ma [4.1.4.2]. This would mean that kama breaks down into:

(90) ka - ma
INTERROG - having
"having a query = uncertainty"

3.6 Semantic Content of the Open Word Classes.

3.6.1 Nouns.

Included in this class are terms referring to fauna and flora and to parts thereof some of which have no everyday English counterpart eg. tunmu "occipital protuberance". Environmental features such as "water", "earth", "sky", "rock", "fire" are described by nouns as well as topography "mountain", "sea", "river" etc.; features of the weather "rain", "cyclone", "wind", "lightning"; aural phenomena such as language, song, music and some noises are described by nouns: it should be noted that many noises eg. "bang", "creak", "squeak" are described by verbs; familial

relationships such as "mother", "brother", "mother's brother" and social phenomena such as age-grades: "baby just born", "young man just initiated", "old woman"; names of totems, sub-sections, moieties and rituals; to spirits and supernatural phenomena "spirit-children", "the Rainbow Serpent"; to artefacts "spear", "club", "fishing net"; proper names for individuals and places; abstract notions of time and space "size", "shape", "shadow", "time"; to some other abstract notions eg. "pain", "dream". However most abstract notions are described by adjectives and verbs.

3.6.2 Adjectives.

Adjectives describe colour; dimension: "big", "short", "small", "long", "wide"; weight: "heavy", "light"; physical properties: "hard", "soft"; taste: "sweet", "bitter"; evaluation: "good", "bad", "easy", "difficult"; human description: "fat", "thin", "grey-haired", "lame"; some human properties: "greedy", "ashamed", "angry", "quiet" but not "hungry", "afraid" for example which are both expressed by verbs; age "young", "old". There is an extensive cardinal number system and a few ordinals [4.1.6]. Some notions which would be looked upon as antonym-pairs are not expressed by the same word class in Muɔinypata eg. "hot" must be expressed by a verb while "cold" must be rendered as an adjective.

3.6.3 Verbs.

Verbs refer to physical, social and mental activities of all sorts: "sweat", "sleep", "cough", "run", "cut", "talk",

"marry", "kiss", "give", "think", "dream", "ridicule" etc.

The bulk of the abstract notions are covered by verbs.

3.7 Particles.

This word-class includes what would be described in a traditional grammar of English as conjunctions and prepositions ie. words such as "not", "and", "although", "if"; "to", "from", "inside" etc. Particles are negatively defined as those non-nominals which do not exhibit any of the defining characteristics of the other non-nominals. They will be dealt with later [4.3].

3.8 Shared Characteristics of the Word-Classes.

If we look at the defining characteristics of the word classes we will see that nouns, verbs and adjectives are interrelated so that while nouns and verbs are different in quite important respects adjectives form a middle ground. This is by no means surprising among the languages of the world; for example, in Japanese, adjectives, like verbs, may carry tense. Ross [1972, 1973] has discussed the interrelatedness of these three categories in English.

Looking at two defining characteristics: the ability of a word to appear with nominal inflections (NI) and the ability of a word to appear with cross-referenced bound pronouns (XRPrn) we can establish a matrix:

	NI	XR Pron
Non-adjectival Nominal [*]	+	-
Adjective	+	+
Verb	-	+

3.8.A Defining Characteristics of some Major Word Classes.

Nouns may be distinguished from the other non-adjectival nominals by introducing the notion of open membership. Then nouns are those non-adjectival nominals which have open membership.

The matrix may then appear as:

	NI	XR Pron	Open Membership
Noun	+	-	+
Adjective	+	+	+
Verb	-	+	+

3.8.B Defining Characteristics of Word Classes with Open Membership.

It is indicative of the importance of these two features involving nominal inflection and pronominal cross-reference accounts for the bulk of the lexicon. The remaining combination $\begin{bmatrix} -\text{NI} \\ -\text{XR Pron} \end{bmatrix}$ defines the lexically small classes of adverb, particle, interjection and adjective/adverb qualifier.

*This excludes the small set of nouns which allows incorporation of cross-referencing bound pronouns [4.1.4.1].

3.9 Noun-Classification.

There are ten noun classes in Muɬinypata. The basis for a noun's membership in one of these classes is semantic (see [6] for details). Noun classes are marked with noun-classifiers (NC). Noun classifiers appear with nominal inflection under certain conditions [4.1.2].

3.9.1 The noun-classifiers are as follows:

1. kaɖu human beings: age-grades, kin-terms,
titles of occupations; some spirits
eg. kaɖu paɭɣun "woman"
 kaɖu muɬɣinga "old woman"
 kaɖu wanangal "doctor"

2. ku non-Aboriginal human beings; particularly
when being contrasted with Aborigines.
 ku wanangal "(white) doctor"
non-human animate nouns and products derived
from them
 ku tɣinmel "seagull"
 ku tɣitayyi "sugarbag"
some spirits
 ku kaɭayɬɣ "devil"
female genitalia
 ku midut "vulva"
 ku tɣimu "clitoris"

3. mi* non-flesh food; faeces
 mi tuwinka "nut"
 mi nukin "faeces"
4. tyu offensive weapons excluding spears; lightning
 tyu wembel "type of club"
 tyu mandadayt "lightning"
5. tamul types of spear
 tamul kuwilar "fighting spear"
6. tungu artefacts and phenomena associated with fire
 tungu metvity "matches"
 tungu tayi "firestick"
7. kuja sources of, and, derivatives from fresh water
 kuja nimalak "spring"
 kuja burbur "soft drink"
8. lalingin phenomena associated with salt water
 lalingin galbanalbak "ocean swell"
 lalingin la "neap tide"
9. da nouns associated with place and time ie.
 place-names, specialised parts of the environment
 eg. totem-site, buildings; time periods eg.
 seasons of the year, "historical" periods.
 da nangu Nangu (place-name)

* Capell [1956:41] lists the class prefixes for a large number of languages of north-west Australia. He draws attention to mi- and what are presumably reflexes of it: m-, ma- and mu-. Dixon [1968:115-116] reports on the wide geographical spread of mayi in Australia while Tryon [1974:293] shows that this pattern is prevalent in the Daly River Languages. None of the other Mujiypata noun classifiers seem to be related to other languages.

ḍa daɪmun	"beach" lit. "sand place"
ḍa dʲeɪi	"a season of the year"
ḍa mundak	"old time ie dreamtime"

10. nanʲdʲi residue class. Includes body-part terms, artefacts, natural phenomena; machines and introduced items in the culture.

nanʲdʲi tʲiɪimeme	"navel"
nanʲdʲi maɪmaɪi	"knife"
nanʲdʲi ŋuŋa	"sun"
nanʲdʲi kanamaɪbaɪ	"aeroplane"
nanʲdʲi payp	"(smoking-) pipe"

3.9.2 Stanner [1964:73-78] observed that the Muɪinypata had a number of classes of nouns. He chose not to use the term "noun class" because "as far as I have been able to determine, there are no grammatical consequences or correlations" [1964:73]. This is not quite true in that noun-classifiers are distinguished from other word classes by the fact that they may appear with a negative prefix, ma- [4.1.5]. However noun classifiers in Muɪinypata do not show the concord through the noun phrase reported for the Daly Family languages by Tryon [1970, 1974]. The basis for recognition of noun classes in Muɪinypata is primarily semantic. This differs from other Australianists eg. Dixon [1968, 1972], Capell [1937], Worsley [1954] and deserves further comment.

All the forms labelled "noun-classifier" in this description appear independently as generic nouns:

kaḍu

"person; man"

ku

"meat; animal"

mi

"plant; food"

tʸu

"weapon"

tamul

"spear (generic)"

tungu

"fire"

kuja

"(fresh) water"

lalingin

"salt water; the sea"

ḍa

"place; time"

nanʸdʸi

"'thing'"

Explanation for the origin of noun-classifiers* (in the more widely used concordial sense which is not used here) are by no means recent. Bleek [1862:104-105] shows that the concord prefixes of Bantu languages arose from nouns which originally had "separate value and meaning, and that nouns formed with them were compounded, and that when the parts to be determined lost their meaning as separate words (ie., became obsolete) those nouns originally compound, became derivative". Dixon [1968:115-116] suggests that noun-classifiers developed from generic nouns as does Worsley [1954:287]. Assuming such an explanation is correct Muɽinypata presents a puzzling situation. Linguistic neighbours to the south and south-west have noun-classifiers which are concordial prefixes [Capell 1956:41] [Bolt, Cleverly, Hoddinott 1970] [Capell 1940:265] while at least some of the northern and north-eastern neighbours have concordial prefixes as reported by Tryon [1974:294]. The situation to the east of Muɽinypata is not known.

Muɽinypata noun-classifiers do not show concord and can be shown to be separate words by the relatively strong mobility criterion [3.3.1]. A noun-classifier may be detached from the noun it classifies:

- (91) ɲayɪ nanʏdʏi ɲanʏdʏin litʏpur
 lsg. NC:thing lsg.have axe
 "I have an axe"

*See also Ibrahim [1973:63-90]

This sentence is quite acceptable even though there is a norm word ordering [5.4]. of noun-classifier immediately preceding the noun:

(92) ḡayī nanʸdʸi liʸpur ḡanʸdʸin

There is a widespread development from a generic noun first being associated with a specific term and then becoming an affix to the specific noun*. Why should Muɿinypata be so different from its neighbours? It might be claimed that Muɿinypata is at an earlier stage than its neighbours. One might suppose that in the future the contemporary preferred ordering of noun-classifier before noun would become obligatory; later the noun-classifier would become prefixed and perhaps still later these prefixes would be reduced, disyllabic forms reducing to monosyllables, for example. On the other hand though, one could speculate that the present situation of Muɿinypata is a development out of an earlier stage in which the language had concordial prefixes.

For the Daly Family Tryon [1974:294] summarises concord as follows:

*The suffixes, -dom, -hood, -ship and the like which used to be separate nouns at an earlier stage of English are somewhat comparable.

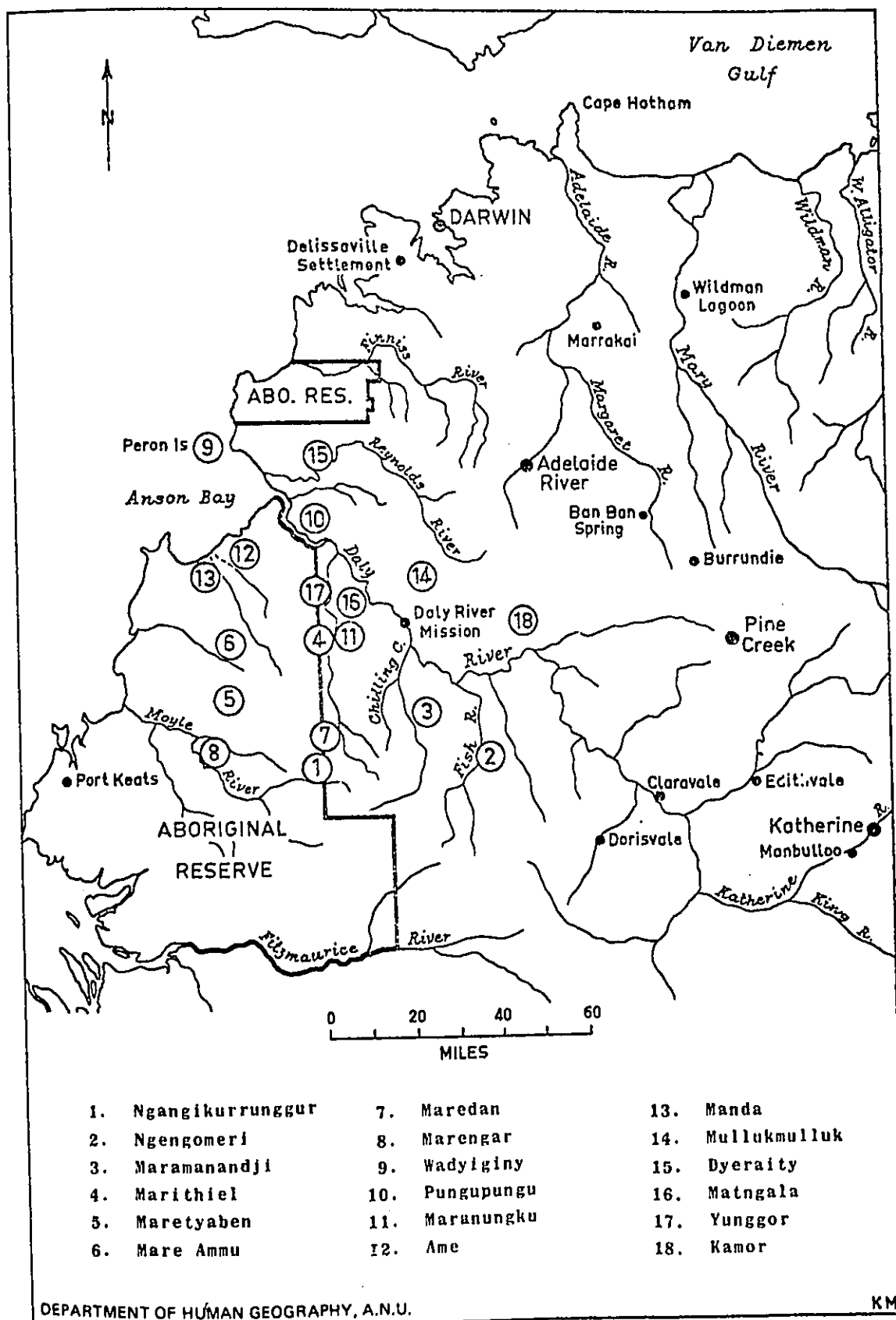
	<u>Noun Classes</u>	<u>Concord (Poss. Adj.)</u>	<u>Concord (Adj.)</u>
Mulluk Group			
1. Mulluk SG	+ (4)	-	+
2. Daly SG	+ (4)	-	-
Brinken-Wogaity Group			
1. Brinken SG	+ (7)	+	+
2. Maranunggu SG	+ (6)	-	-
3. Wogaity SG	+ (4)	-	-
Tyemeri Group	+ (7)	+	+

3.9.2.A Noun-Class Concord in Daly River Languages

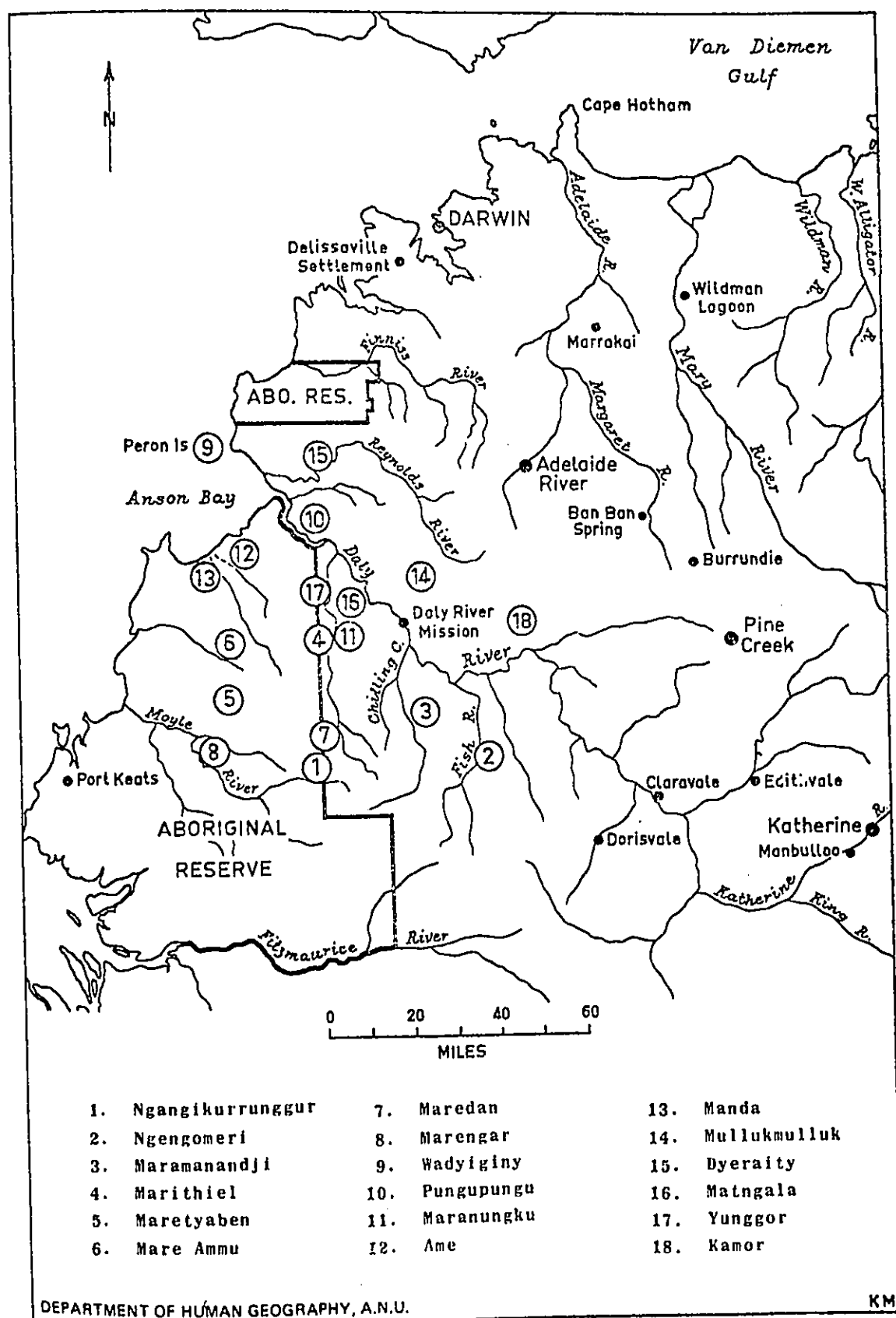
Birk [1974:139-147] shows that there is only limited concord with adjectives in Malak-Malak: concord only takes place with a small sub-set of the adjectives and the semantic field of nouns taking a particular adjectival concord does not coincide with the semantic fields covered by the noun-classes for those nouns. Looking at the geographical placement of these languages [3.9.2.B] it can be seen that there is a progression from no concord whatsoever: Mulinypata, the Maranunggu and Daly sub-groups to limited concord: the Mulluk sub-group to concord with adjectives and possessive adjectives: the Tyemeri Group and the Brinken sub-group. The writer's own fieldwork on Maringarr (Tryon's Marengar) indicates that there is no concord for noun-classes in that language.

It might be suggested that the area of noun-class concord is "shrinking". Tryon's fieldwork on Maringarr was carried out mainly at Daly River Mission from 1967 to 1970. The languages spoken at the Daly River Mission are mostly from

the Tyemeri group and Brinken sub-group, (predominantly Ngangigurrunggurr in fact), which are all languages exhibiting concord with noun-classes. The writer's fieldwork on Maringarr was carried out at Port Keats mainly in 1973 and 1974. The predominate language at Port Keats is Mujinypata which shows no concord. Perhaps Maringarr has been influenced by Mujinypata. It is difficult to do more than speculate with the data available but it may happen that all the Daly River languages will lose the use of concord with noun-classification.



3.9.2.B Map of Daly Family languages (reproduced from D.T. Tryon [1974] "Daly Family Languages, Australia" (Canberra: Pacific Linguistics) with the permission of the author).



3.9.2.B Map of Daly Family languages (reproduced from D.T. Tryon [1974] "Daly Family Languages, Australia" (Canberra: Pacific Linguistics) with the permission of the author).

4 Morphology

4.1 Morphology of Nominals

4.1.1 Pronominal Morphology

4.1.1.1 All the pronouns take the nominal inflections,

-te ~ -je and -nu may occur with the universal affixes

[4.6] as do other nominals.

The unbound pronouns of Muɔinypata may be listed as follows (in the absolutive case):

Number	Group contains speaker & addressee	Group contains speaker but not the addressee	Group contains addressee but not the speaker	Group contains neither addressee nor speaker	Status
Group consists of exactly one individual	-	ɲayi	nʲinʲi	nukunu	Masculine
				nigunu	Feminine
Group consists of exactly two individuals		ɲankuninda	nankuninda	peninda	Group has all masculine members
		ɲankuɲinda	nankuɲinda	peniɲinda	Group has at least one feminine member
		ɲanku	nanku	piguna	Group has all members from same subsection
Group consists of no less than three individuals and up to about ten individuals	nekineme	ɲankuneme	nankuneme	peneme	Group has all members masculine
	nekiɲime	ɲankuɲime	nankuɲime	peniɲime	Group has at least one member feminine
Group consists of about ten or more individuals	ɲanki		nanki	pigunu	(Group has all members from same subsection)

4.1.1.A Muɔinypata Unbound Pronouns.

The twenty five pronominal forms are distinguished in terms of three dimensions : number, person and "status".

Number is a four-term system:

singular	(sg)
dual	(du)
paucal	(pc)
plural	(pl)

Unlike many other Australian languages in which there is a bipartite or tripartite distinction in non-singulars, the plural form cannot be used as a cover term for non-singular. To use the plural form for a group consisting of two or a few individuals is ungrammatical. The boundary between paucal and plural numbers is fuzzy as it is between "a few" and "a lot" in English. Person is also a four-term system:

first person inclusive	(1 inc)
first person exclusive	(1 exc)
second person	(2)
third person	(3)

The third system has been labelled "status" although this is not really adequate. It is a three-term system distinguishing between groups all of whose members belong to the same subsection and groups which do not have such a composition (for details of the subsection system see Falkenberg [1962:206ff] and Stanner [1936]). Native speakers describe the distinction in terms of whether all the people in the group are "brothers and sisters" or not. The groups whose members are not all

of the same subsection are further divided into those groups all of whose members are masculine and groups in which at least one person is feminine (ie. the exact converse of the French non-singular third person pronouns, ils and elles). This three-term system will be described as:

masculine	(MASC)
feminine	(FEM)
sibling*	(SIB)

but the more precise descriptions given above should be kept in mind.

There is one problem remaining in the forms given in [4.1.1.A]. *ḡanki*, *nanki* and *piḡunu* each refer to two quite distinct groups: pc SIB, and, pl .

Thus each of these forms has two functions. Native speakers, by contrast, describe the situation in these terms: there is one form for each function (even though the two forms happen to be homophonous) so that there are two distinct words, *ḡanki*, 1 pc SIB and *ḡanki*, 1 pl:

(93) *ḡanki pekengu-ka ḡanki ḡatan yi ḡanki*
 "ḡanki" two -TOPIC "ḡanki" brother and "ḡanki"
 wunagaṭ
 mob
 "There are two "ḡanki"'s, brother "ḡanki" and
 mob "ḡanki".

* Following the native speaker description.

It should be noted that a form such as neki in which three distinct functions (exemplified by its exclusive counterparts: ɲankuninda, ɲankuɲinda and ɲanku) are subsumed under one form is considered by native speakers to be one word:

- (94) neki-ka muɲinʸ numi
 "neki"-TOPIC word one
 "'neki" is one word'

Following the native speaker reaction, the analysis of pronouns in this description will include three pairs of homophonous but non-synonymous forms:

Person Number	1 inc	1 exc	2	3	"Status"
sg	-	ɲayi	nʸinʸi	nukunu	MASC
				nigunu	FEM
du	neki	ɲankuninda	nankuninda	peninda	MASC
		ɲankuɲinda	nankuɲinda	peniɲinda	FEM
		ɲanku	nanku	piguna	SIB
pc	nekineme	ɲankuneme	nankuneme	peneme	MASC
	nekiɲime	ɲankuɲime	nankuɲime	peniɲime	FEM
	ɲanki		nanki	pigunu	SIB
pl	ɲanki		nanki	pigunu	-

4.1.1.B Muɲinypata Pronouns (showing abbreviations)

It might be thought that it would be revealing to display a system which involves three sets of variables in a three-dimensional matrix (cf. Turkish vowel system [Gleason, 1961:267]). However this would be by no means simple since each set of variables has at least three members. Each face of the "cube" (as a representation of the three-dimensional matrix) could be divided into a number of areas corresponding to the number of variables in that set of variables; each pronoun could then be represented as a particular fixed trajectory through this 3-space (cf. Cherry's [1957:94] description of phonemes as a trajectory through an n-space where n is the number of binary (note that Cherry's system is different although analogous to what is referred to here) features used to describe the phonological system).

More revealing is a dependency tree showing the pronouns in terms of eight binary features (see also [Hale 1973:322ff] for a feature representation of a more simple pronoun system):

- ±sg
- ±du
- ±pc
- ±3 (3rd person vs non-3rd person)
- ±2
- ±inc
- ±SIB
- ±MASC

Each terminal node represents a distinct pronominal form (with the exception of the two non-distinct forms produced by the tree, with the functions 1 pc inc SIB and 1 pc exc SIB, which are correctly subsumed under one form in [4.1.1.B]) the function being determined by the branchings in the tree:



Dependency Tree Array of Mujinypata Pronouns.

Branching to the left is positive for the feature presented in each margin; branching to the right is negative for that feature. For example, *ɲayi* is + SINGULAR, - 3RD PERSON, - 2ND PERSON.

4.1.1.2 Analysis of the Pronominal Forms.

In the dual and paucal pronouns there are four recurring elements, termed number indicators (NI) and glossed as:

ninda	du	MASC
ŋinda	du	FEM
neme	pc	MASC
ŋime	pc	FEM

These could be analysed as consisting of two parts, a sex marker:

n-	MASC
ŋ-	FEM

and a number marker:

-inda	du
-eme	pc
-ime	

However, such an analysis would have to specify that -eme is only attached to n- and -ime to ŋ-^{*}. Reflexes of -eme ~ -ime in neighbouring languages [4.1.1.4] suggest that there may have once been just one form -ime which would give more symmetry to the system.

The first person exclusive and second person pronouns can be analysed as follows:

ŋ-	1 exc
n-	2

*Lest unacceptable forms *nime or *ŋeme be generated.

To this prefix is attached a form which indicates

±sg [4.1.1.C]:

-ayi	+sg
-ank	-sg

To the non-singulars is attached a form indicating

±pl:

-u	-pl
-i	+pl

To the -pl form is attached a form indicating ±SIB:

-∅	+SIB
-NI	-SIB

Thus a form such as *ḡankuḡime lpc exc FEM* is analysable as:

(95) ḡ - ank - u - ḡime
 FEM - -sg - -pl - -SIB

ḡankuḡime, then, is analysed as feminine, non-singular, non-plural, non-sibling with the number indicator being analysed separately as above.

Such an analysis generates all first person exclusive and second person pronouns except the problematic paucal sibling forms: *ḡanki 1 pc exc SIB* and *nanki 2 pc SIB*. However it would also produce for the second person singular the unattested form:

*
 nayi
 (what actually occurs is *nʸinʸi*)

The first person inclusive pronouns:

neki 1 du inc
nekineme 1 pc inc MASC
nekinime 1 pc inc FEM

can be analysed as an element

neki 1 inc

to which is attached ϕ in the case of the dual and
the appropriate number indicator for the paucal forms.

The third person pronouns, similarly, cannot be
analysed economically. The dual and paucal non-
sibling forms are analysable as an element pe-
to which two elements distinguishing sex are added:

ϕ MASC
-ni FEM

To the resulting forms are attached the appropriate
number indicators. The forms:

piguna 3 du SIB
pigunu 3 pc SIB/3 pl

are distinguished by the final vowel.

The analysis given here is not supposed to be overly
useful. An analysis which requires twelve elements:
 η -, n-; ayi, ank; u, i; ϕ , n, η , inda, eme ~ lme,
and instructions for how they are to be put together
in order to attempt to describe sixteen forms (viz.
first person exclusive and second person pronouns)
can hardly be called economical. This section is
included simply to draw attention to some partial

regularities in the pronoun system.

4.1.1.3 Special uses of Pronouns.

4.1.1.3.1 The non-singular 3rd person pronominal forms may be used as vocatives.

- (96) peninda - ka
 3 du MASC - TOPIC
 "Hey, you two (males not of the same
 subsection)!"

The second person pronominal forms which would be expected as vocatives may also be used for this function, thus (96) is alternatively expressed by:

- (97) nankuninda - ka
 2 du MASC - TOPIC
 "Hey, you two (males not of the same
 subsection)!"

4.1.1.3.2 nukunu is sparingly used as an anaphoric form for non-human nominals and rarely for non-animate nominals.

- (98) ku lawanga-wa
 NC:meat wallaby - EMPH
 "(There's) a wallaby!"
 ŋayi - Je nukunu-ϕ pan(- ϕ) -baɟ
 1sg - ERG 3sg(MASC)-ABS 1sg(-3sg)-strike
 "I'll hit it"

Non-singular third person pronominal forms are occasionally used referring to non-human, animate nouns but have not been observed used to refer to inanimate nouns.

4.1.1.3.3 The first person dual inclusive pronoun, *neki*, is used for *ṇanki* in two situations:

- (a) when one wants to emphasise the intimacy of the group being described although there are more than two.
- (b) when the effect is "all-inclusive" for example:

(99) *kale neki*
 mother 1 du inc
 "Mother of us all ie. the Virgin Mary"

In both cases there is a tacit assumption that the addressee is included in the group: native speakers considered the suggestion that the addressee not be included as absurd.

4.1.1.4 Relationship with Daly River Pronominal System.
Ngangkikurrunggurr and *Ngengomeri* (see map [3.9.2.B]) have identical forms to *Mujinypata* for the first and second person pronouns. The paucal number indicator (*neme* ~ *ṇime*) might be supposed to have reflexes in such forms as 1st person plural inclusive:

Marithiel	ḡaḡkinim
(Maramanandji	ḡaḡkiwinYim)
Marengar	kaḡkinim
Nganggikurrunggurr	nayinime
Ngengomeri	nayinime

Perhaps too the 1st person plural form, ḡanki, in Muḡinypata can be related to ḡaḡki ~ kaḡki in the first three forms above.

In addition similar forms to the Muḡinypata pronouns appear in the Daly 1st person dual inclusive pronouns^{*}:

Marithiel	ḡaḡki
Maramanandji	ḡanki
Marengar	kaḡki
Maranunggu	ḡaḡku
Manda	ḡaḡku
Ami	ḡanku
Pungupungu	ḡaḡka
Wadyiginy	ḡaḡka

There are no other significant similarities between pronoun paradigms of Muḡinypata and the Daly Family Languages.

* These and the 1st person plural inclusive pronouns are taken from Tryon [1974:295].

4.1.2.1 Case inflections.

Ergative - Instrumental. The two case functions, ERGATIVE and INSTRUMENTAL are marked by the case inflection, /-te ~ -je/, which is suffixed to the nominal stem. /-je/ occurs after stems ending in vowels, semivowels and /r/ while /-te/ occurs after stems ending in stops, nasals, laterals and rhotics. Thus after stems ending in /r/ either alternant may occur. The alternation is predicted by the morphophonological rule, MP-5 [2.1.10.5].

Ergative NP's are cross-referenced into the verb by bound pronouns in auxiliaries [4.2] so that in most cases the ergative inflection is redundant [5.5]. This is because if the syntactic function of a nominal is marked in the verb then to explicitly mark that nominal with an inflection is redundant. The nominal inflections cease to be redundant when the markings in the verb do not distinguish between different syntactic functions. When it is redundant it generally does not occur.

Absolutive is unmarked.

Dative is marked by the case inflection /-nu/. For a description of the uses of Mulinypata case inflections see [Walsh 1976].

Case Inflection Nominal Stem	Absolutive	Ergative/Instrumental	Dative
"NC: man"	kaɖu	kaɖuɟe	kaɖunu
"Rainbow serpent"	kunmangur	kunmangurɟe kunmangurte	kunmangurnu
"woman"	paɭun	paɭunte	paɭunnu
"quiet man"	manʏ	manʏte	manʏnu
"cat"	yirtʏip	yirtʏipte	yirtʏipnu
"who"	nangal	nangalte	nangalnu
"kaykay" (personal name)	kaykay	kaykayɟe	kaykaynu
"1st person singular"	ŋayi	ŋayɟe	ŋayinu
"good"	pata	pataɟe	patanu

4.1.2.A Examples of Case Inflections on Nominals.

4.1.2.2 Case Marking in Australian Languages.

In most languages in Australia noun and adjective inflect for case and do so in the same way. A few languages have been reported as lacking any case inflections: these languages are in the northern part of the Northern Territory, for example Nunggubuyu [Heath to appear c], Maung [Capell and Hinch: 1970] and Gunwinygu [Oates, 1964]. In these languages the case relations of (at least) subject and object are indicated by cross referencing. Case-specified incorporated pronominal forms are prefixed to verb stems [4.2].

Some languages which have such pronominal affixation (sometimes bound pronouns are suffixed, as in Southern Baagandji [Hercus: 1974]) also have case marking on NP's representing subject and object. The case marking most commonly brackets the three functions: transitive subject (direct) object and intransitive subject in either of two ways. A nominative-accusative pattern brackets transitive subject and intransitive subject and labels it "nominative" which is distinguished from "accusative", the labelling for (direct) object function. Ergative-absolutive patterns bracket intransitive subject and (direct) object functions and label them "absolutive" which is distinguished from "ergative" the label for transitive subject function. (The term "nominative" has often been used in the past for "absolutive" but the latter term will be used in this discussion.) Most languages in Australia follow an ergative-absolutive pattern for nouns, nominative-accusative for pronouns. A few of these have both pronouns and nouns following an ergative-absolutive pattern, for example, Walbiri [Hale, 1970:776-9] and Muɲinypata.

In these two languages pronominal cross-referencing follows a nominative-accusative pattern. Such languages redundantly identify the main syntactic case functions on nominals as well as by cross-referencing in verbs. In some of these languages case marking on nominals becomes optional and rarely used just because there is redundancy. One such language: southern Baagandji usually does not mark the ergative [Hercus: 1974]. Similarly Muɲinypata rarely marks ergative using the case marking only when emphasis is required

or to avoid ambiguity [5.5]. A language such as Nunggubuyu might be viewed as having lost its ergative marking because there was no need for it. A language such as Walbiri which appears to still use its ergative marking albeit redundantly [Hale 1973:328-330] could be viewed as being earlier on an evolutionary scale. Muɣinypata is further along this scale towards loss of nominal ergative than Walbiri but plainly not so far as Nunggubuyu.

The form of the case marking for ergative NP's is very similar in very many languages of Australia. The inflection is frequently $-(\eta)gu \sim lu$ on nouns ending in a vowel but a homorganic stop plus $-u$ when the noun ends in a nasal. Otherwise the common ending is $-lu$ (or $-lu$ only after a vowel). Some languages have both $-(\eta)gu$ and $-lu \sim -lu$ as allomorphic alternants after a vowel. There are also some languages with an ergative case marking system which evidence more varied allomorphic alternation in the case marking. For example, Walmadjari [Hudson: to appear] has six allomorphs for the ergative case-marking:

- lu after a stem of three syllables or more ending in a vowel.
- $-gu$ after a stem of two syllables ending in a vowel.
- $-u$ after a stem ending in a liquid.
- $-du$ after a stem ending in a bilabial or apico-alveolar nasal or stop.
- $-du$ after a stem ending in an apico-domal nasal or stop.
- $-du$ after a stem ending in a dorso-velar or laminal nasal or stop.

What is important for our purposes here is the fact that regardless of a rather restricted alternation the ergative suffix is monosyllabic.

Another wide-spread pattern in Australia is for a language which has an ergative to have an identical marking for instrumental case function. Most languages have a locative inflection on nouns and adjectives. Typically this is the same as the ergative marking except for a change in the final vowel, -a being substituted for -u. The alternations for ergative are generally the same for locative. Thus, Walmadjari has as locative inflection -|a ~ -ŋa ~ -a ~ -da ~ -ɖa ~ -dʷa in the corresponding environments. These very wide-spread patterns show other instances of the case markings for ergative, instrumental and locative case functions being monosyllabic.

In some languages of the north-west one or more of these case markings is disyllabic. For example, in Maringarr the ergative/instrumental case marking on nouns and adjectives is -ŋarin (Walsh). In Djeraidj the instrumental is -nōwan; for Ngangkikurunggurr -ningi; for Maranunggu -nunu; for Amd and Manda -nene; for Wadyidʷiny -karaŋ [Tryon: 1974]. Miriwung has no ergative marking but has an instrumental, -beri ~ wuri [Kofod to appear]. Most of the Daly River languages have disyllabic locative case markings (although Maringarr has (-na)) - but not obviously relatable to the instrumental inflections. Muɟinypata has no locative case inflection but has a disyllabic locative preposition, ŋaɟa.

4.1.2.3 A Speculative Historical Excursus.

In most discussions of Australian case systems languages of the north-west have been considered exceptions. I would like to suggest an explanation here for the apparently aberrant pattern.

Most Daly River languages have a disyllabic ergative/instrumental but scattered through are some with monosyllabic forms: Malag Malag, -waŋ; Matngala and Gamor -ni and Maridhiel, -kin [Tryon:1974]. Mulinyapata, a non-Daly River language, has the monosyllabic, -te ~ -je. Djamindjung has a monosyllabic ergative/instrumental/locative: -di ~ -(n)i ~ -ki [Hoddinott and Kofod:to appear]. The scattering of monosyllabic or disyllabic forms suggests that disyllabic suffixes may have been widespread in this area and then have been reduced to monosyllables in some languages by deletion of one syllable, generally the first. The reason for viewing the phenomenon this way rather than as an accretion of a syllable onto an original monosyllabic form is discussed below.

Contiguous languages such as Djeraidj and Malag Malag have ergative/instrumental case inflections -nōwaŋ and -waŋ respectively. I would speculate that the Malag Malag form developed from -nōwaŋ, by the deletion of the first syllable. Now Tryon [1974:xiii] groups these two languages together into one sub-group, Mulluk. The languages contiguous to Mulluk (see map [3.9.2.B]) Matngala and Gamor have -ni as the ergative/instrumental marking. These languages make up the sub-group, Daly, which,

with the sub-group, Mulluk, make up the group, Mulluk.
We might speculate that Proto-Mulluk had an ergative/
instrumental suffix:

*
-nVwaŋ

The sub-group, Proto-Daly, deleted the final syllable
to give the modern forms. The sub-group, Proto-Mulluk,
retained *-nVwaŋ and gave rise to -waŋ in the modern
language, Malag Malag, by deletion of the first
syllable while Djeraidj retained the disyllabic form;
-nōwaŋ.

Now this is plainly speculation but is intended to
illustrate how apparently unrelated case markings
in contiguous languages may be related to a common
source.

Let us speculate further that the ergative-instrumental
case marking arose from an earlier disyllabic form.
Suppose Proto-Mujinypata had as part of its case system:

ERG/INST.	* ŋaɣe
LOCATIVE	* ŋaɣa

Maringarr, a neighbouring language with much in common
(despite being placed in a separate family), has the
ergative/instrumental marking : -ŋaɣin. Analogously
to the situation for Malag Malag and Djeraidj we might
suppose that an earlier language which later gave
rise to Mujinypata and Maringarr had a disyllabic
ergative/instrumental marking*. Mujinypata deleted the

* But hardly from the source *ŋaɣe.

languages we have just -ra

Ngarinjin

Munumburu

Woljamidi

in some -ŋa appears

Yuulngu

Lardil

Dhalandji

also Adnjamadhanha (to the south)

(Jigalong ŋka)

More often the two reflexes are allomorphic variants:

Yulbaridja	-ŋka ~ -la (tja)
Walmadjari	-ŋa ~ -!a
Walbiri	-ŋga ~ -!a
Pitjantjatjara	-ŋga ~ -la (Ta)
Bandjima	-ŋka ~ -la
Yindjibarndi	-ŋka ~ -La (Ta)
Ngarluma	-ŋka ~ -La (Ta)
Thargari	-ka ~ -ra (Ta)
Yinggarda	-ŋka ~ -la (Ta)
Nanda	-ŋka? ~ -la
Nyangumarda	ŋV tji(ri)

A few languages retain a disyllabic form:

Yuulngu	ŋuŋa
Gunwinygu	kore
Bayungu	ŋuŋa
perhaps Unggumi	wiren*
Mulinypata	ŋaŋa

* This and the case markings given above in this list are from Blake [1974].

first syllable to get modern -je while Maringarr retained the disyllabic pattern. The alternant -te in Muɟinypata arose from the hardening rule described earlier [MP-5]. The environment for such a hardening rule to apply only became possible after the initial syllable of the protoform had been deleted. Synchronic alternations involving hardening of continuants to stops are part of a general phonological process in Muɟinypata [MP-1, 3, 4, 5, 10]. Additionally, we would claim that the locative case form -ŋaɟa in proto-Muɟinypata has become a preposition in the modern language. What is appealing about these forms now is that like most Australian languages Proto-Muɟinypata has an ergative/instrumental case marking differing from the locative just in the final vowel.

Maringarr has a modern locative expression, na, which may have arisen from a disyllabic locative in Proto-Muɟinypata - Maringarr which lost its initial syllable. On a wider scale we might speculate that the locative over a large part of north Australia was disyllabic. The first syllable was ŋa and the second syllable was an apico-alveolar segment (specifically, a liquid, perhaps) followed by a:

*
ŋaLa

Reflexes of this proto-form appear in a large number of modern languages. By deletion of one syllable we either have *ŋa or *La, depending on whether the second or first syllable was deleted. In these

I have indicated above (in some cases) that languages allow more than two variants. Significantly, the third variant tends to also be an alveolar segment. Thus it may be that we would need to posit a proto-locative which has an initial velar (nasal) followed by /a/:

$$*_{\eta}a \left\{ \begin{array}{c} L \\ T \end{array} \right\} a$$

Of course there are considerable difficulties in these suggestions. What has motivated the change of vowel (from the wide-spread *u to *e) for the ergative/instrumental inflection? For the locative inflections although there is a "frame" of an initial velar in the first syllabic and an initial alveolar in the second syllable there is considerable fluctuation in the vowels. Perhaps the proto-form would be better posited as:

$$*_{\eta}V \left\{ \begin{array}{c} L \\ T \end{array} \right\} V$$

Furthermore Hale [1976] has suggested that the allomorph -ngu arose from -lu ~ -du through a morphological reanalysis following a change in the phonotactics of the language. If this is so then it does not support the posited dimorphic proto-ergative/instrumental. Perhaps one could explain the dimorphic ergative/instrumental in terms of the "double" ergative marking found in some Australian languages, eg. Walbiri.

Dative.

Typically Australian languages have as the case marking for dative (and allative) function: the suffix -gu. Languages around the Daly River more often have an initial alveolar nasal:

Mujinypata	nu
Malag Malag	nö
Djeraidj	nö
Madngala	nun
Gamor	nun
Ami	nö
Manda	nö
Maringarr	ni
Magatige	ni

The languages of the Daly River - Port Keats area have no proven genetic relationship with the bulk of Australian languages. While a tenuous link is suggested between the ergative/instrumental case marking of these languages and the wide-spread Australian pattern no attempt is made here to posit a connection between the dative marking of the languages of this area and the general Australian pattern.

4.1.3 Demonstratives.

There are four demonstratives in Mujinypata. These may be described in terms of two binary oppositions:

relative closeness to speaker	:	relative distance from speaker
(ie. "here")		(ie. "there")
and near	:	remote

The forms are:

	<u>here</u>	<u>there</u>
near	kan ^y i	pana
remote	n ^y ini	paŋu

4.1.3.A Demonstratives.

In the opposition kan^yi: n^yini, kan^yi is the unmarked term which may cover the semantic range of both terms; paŋu is the unmarked term in the other opposition. The marked terms could be glossed as:

n ^y ini	"here but not so close"
pana	"there but not so far away"

while the unmarked terms when used in contrast with the marked members can be glossed as:

kan ^y i	"right here; just here"
paŋu	"over there; way over there"

The reference of the four terms sometimes overlaps especially for n^yini "here (remote)" and pana "there (near)" so that it is not surprising that the two terms whose reference is most distinct should become the unmarked terms. Demonstratives behave syntactically like nominals, in that they can occur with nominal inflections:

- (100) palŋun kan^yi-je ŋayi- $\emptyset$ pan-ŋi-baɖ
 woman here-ERG lsg-ABS 3sg-lsg-strike
 "This woman hit me"

and (more specifically) like adjectives they have adverbial counterparts:

- (101) gayi-ka kan^{vi}i nem
 lsg.-TOPIC here lsg.sit
 "I'm sitting here"

4.1.4.1 Body Part Incorporation in Nominals.

We saw [3.1.3] that adjectives occur with incorporated body part nouns ie. an affix to the adjective stem which denotes a body part term. The forms that body part terms take when they are incorporated are given below [4.1.4.1.A]. Besides adjectives, incorporated body part terms occur with a very restricted set of nouns. This set comprises a subset of the nouns denoting body parts, the two nouns: *net* "boil" and *lirwi* "sore", and a few other nouns denoting sound and motion, food and husband, which, however, are extremely restricted in the body part terms they will incorporate so that they are better treated as idioms.

A nominal which incorporates a body part term also incorporates a pronominal affix in the direct object form [4.2.1]. The number indicator of the pronominal form [NI] comes after the incorporated body part term while the remainder of the pronominal form precedes the body part term and follows the nominal root. These suffixes to the nominal root are stem-forming; such derived nominals may take the full range of nominal inflections in a scheme like this:

Incorporated Form	Independent Form	Approximate Meaning
ji	lumbu	buttocks
jidaui	mudidi	area just above buttocks
tama	tamal tunmu	neck nape
tanme	tYemen	tongue
tarmu	tarmu	lower leg
tayi	wantayi	armpit
tayyi	taytpi	lip; mouth
tawi	taytpi taytpi yutpany	lip; mouth chin
wan	paŋda	area between legs
we	pelpitY pemar	head head hair
wiŋka	piŋkal	knee
ye	tYe	ear
yi	ŋapulu tYimu	breast ear
yiui	tYiuiimeme	area around navel

4.1.4.1.A Incorporated Forms for Body Part Terms

This is simply a listing of incorporated forms for body-part terms. Semantic issues are dealt with below [6]. Forms are listed in (English) alphabetical order using the initial segment of the incorporated form. For these purposes the alphabetical listing is a b d ɔ dY e g i k l | lY m n ŋ nY ŋ p ɹ r ɹ t u w y. The list does not pretend to be exhaustive; a few examples are given of distinct independent body part terms being subsumed under one incorporated form. For instance nitYi "arm" and nitYi kuŋeŋ "elbow" are subsumed under the incorporated form, be.

Adjectives such as the one exemplified next are composite:

- (102) nigungu mujuwulŋka
 she beautiful
 "She's beautiful"

This becomes more evident when there is a non-zero pronominal affix incorporated into the form:

- (103) ŋayi mujuwul-ŋi-ŋka
 1sg beautiful-1sg-face
 "I am beautiful"

In fact to gloss mujuwul as "beautiful" is not quite accurate since we have expressions such as:

- (104) kaɖu mujuwul-be
 person "beautiful" - arm

This does not mean "man with beautiful arms" but rather someone who is particularly adept in activities which involve the use of arms. Such a term then might

be applied to a fine spearman. mujuwul can be crudely glossed as "having desirable characteristics" where what is desirable is of course culture - specific. In its adverbial form mujuwul has differing meanings according to context.

- (105) nayi nem mujuwul
 lsg lsg sit "having desirable characteristics"
 "I sat comfortably"

- (106) nayi nuuinida mujuwul
 lsg lsg "came" "having desirable characteristics"
 "I came without mishap; I had a good trip"

The adjective tuttut "cut off" commonly incorporates body part terms. An amputee may describe himself as

- (107) nayi tuttut - ni - tarmu
 lsg cut off - lsg - lower leg
 "I am a person with my lower leg(s) cut off"

A bullock may be described as:

- (108) ku tuttut - ø - waimbur
 NC:meat cut off - 3sg - testicles
 "an animal with testicles cut off; castrated beast"

The terms, net "boil" and lirwi "sore", may appear with any body part terms which can be incorporated. It is feasible for net or lirwi to be associated with

daɪpi "skin" but daɪpi does not have an incorporated form and may not occur with ɲet or lirwi in the sort of construction being discussed here. Native speakers said

- (109) ɲet ɲaɹa daɪpi
 boil LOC skin
 "boil on skin"

was marginally acceptable but preferred the more specific renderings such as:

- (110) ɲet - ø - ma
 boil - 3sg - hand/finger
 "He has a boil on his hand/finger"

and

- (111) lirwi - ɲi - ɹɹ
 sore - 1sg - buttocks
 "I have a sore on my buttocks"

ɲet and lirwi were checked with the other body part terms and produced acceptable combinations although the reading of the expression may be restricted:

- (112) ɲet - ɲi - ɲka
 boil - 1sg - face/eye
 "I have a boil on my {face
 *
 eye}"

Other nouns, nugaṇ and nugalīn, both meaning "husband" are so restricted in the body part terms they will incorporate that the resulting expressions might be labelled idioms:

- (113) paḷḷun nugaṇ/nugalīn - ∅ - be
 woman husband - 3sg-arm
 "married woman"

Similarly muril "feather" appears only with the incorporated form for "arm" to give the generic term for "bird":

- (114) muril - be*
 feather - arm
 "bird (generic)"

dʷebdʷeb "food" occurs only with "lip/mouth" to produce:

- (115) dʷebdʷeb - ∅ - tayyi
 food - 3sg - lip/mouth
 "He's greedy for food (vegetable)"

Similarly,

- (116) muḷinʷ - ŋi - tayyi
 language/word - 1sg - lip/mouth
 "I am a person who talks too much;
 I'm a chatterbox"

* Incorporated pronominal forms have not been included for expressions which have human reference since it is difficult to contrast zero with any of the overt pronominal markings for these nouns.

The body part term kulpuu "non-head hair" may incorporate most body part terms:

- (117) kulpuu - ŋi - dau
 non-head hair - lsg - back
 "I have a hairy back"

The more restricted term pema "head hair" is, predictably, very restricted in that it only appears with the incorporated body part terms for "head":

- (118) pema - ŋi - we
 head hair - lsg - head
 "I have (much) head hair"

Such an expression may be negated:

- (119) kaɖu manɔŋa pema - ø - we
 NC:person NEG headhair - 3sg - head
 "person without head hair ie. bald man"

It is obvious that combining pema with other body parts will produce anomalous expressions such as:

- (120) *kaɖu pema - ø - dau
 NC:person head hair - 3sg - back
 "person with (profuse) head hair (growing) on his back"

4.1.4.2 The derivational suffix, -ma, is identical in phonological form to the incorporated body part term for "hand/finger" [4.1.4.1] but has quite different functions.

4.1.4.2.1 The comitative (following the terminology adopted in Dixon ed. [to appear], -ma, is suffixed to nouns and noun-classifiers. When attached to body part terms the comitative has two special functions:

- (a) sore; painful
- (b) developing; large relative to the norm;
well endowed with.

One might speculate that the first function arises from a word of related meaning matar "sick, ill", the suffix, -ma being a contraction of what was once a separate word.

(121) kaḍu tarmu-ma
NC:person (lower) leg-COM
"man with sore leg"

(122) paḷḷun kamal-ma
woman face/eye-COM
"woman with sore face/eye"

Such expressions may appear in a sentence with a nominal inflection:

- (123) palḡun kamal-ma-je ḡayi-ϕ
 woman face/eye-COM-ERG lsg-ABS
 pan-ḡi-baḡ
 3sg-lsg-strike
 "The woman with a sore face/eye hit me"

(122) may have another interpretation:

- (124) palḡun kamal-ma
 woman face/eye-COM
 "woman with keen eyesight"

Similarly, an expression involving t^yimu "nose" has two interpretations:

- (125) kaḡu t^yimu-ma
 NC:person nose-COM
 "person with sore nose" / "person with
 keen sense of smell"

Some body part terms select just one of the functions of the comitative and this selection appears to be semantically motivated. Thus ḡaḡaḡa "ankle" always interprets -ma as "sore" or "painful":

- (126) kaḡu ḡaḡaḡa-ma
 NC:person ankle-COM
 "person with sore ankle(s)"

but a body part term such as ḡapuḡu "breast" may

occur with any of interpretations in (a) and (b):

- (127) kaḍu ḡapulu-ma
 NC:person breast-COM
 "person with painful breasts" ;
 "person with budding breasts" ;
 "person with larger breasts than the norm"

It might be thought that one expression with three quite distinct meanings would result in ambiguity. In fact context will normally make it clear which reading is to be taken; otherwise there are alternative means of expression which are not ambiguous:

- (128) kaḍu ḡapulu wiye
 NC:person breast bad
 "person with painful breasts"

- (129) kaḍu ḡapulu ḡala
 NC:person breast big
 "person with large breasts"

Because a nominal with non-specific reference has been used in (127) three readings can be assigned to the sentence. If mutʼiḡga "old woman" is introduced into that sentence at least one of the readings is excluded:

- (130) mut'yinga napulu-ma
 old woman breast-COM
 "old woman with painful breasts"
 * "old woman with budding breasts"
 ? "old woman with breasts larger than the norm"

If maḍinbuyyi "young girl" is used the reading "with budding breasts", is possible but the reading "with breasts larger than the norm" is unlikely:

- (131) maḍinbuyyi napulu-ma
 young girl breast-COM
 "young girl with painful breasts"
 "young girl with budding breasts"
 ? "young girl with breasts larger than the norm"

When the comitative is used with body parts, incorporated pronominal forms are suffixed to the nominal stem*:

- (132) ṇayi-ka ṇaḍaḍa-ṇi-ma
 1sg-TOPIC ankle-1sg-COM
 "I am a person with sore ankles" ;
 "I have sore ankles"

* All examples mentioned so far have been third person singular with is zero so that strictly the examples have been underglossed. (126), for example, should strictly be:

- (133) kaḍu tarmu-ḍ-ma
 NC:person (lower)leg - 3sg - COM
 "person with sore leg"

Such expressions may occur with nominal inflections:

- (134) ṇaḍaḍa-ṇi-ma-je*
 ankle-1sg-COM-ERG
 maṇe-nʸi-ma-ø paṇ-nʸi-baḍ
 hand-2sg-COM-ABS 1sg-2sg-strike
 "I, with sore ankles, hit you who had
 a sore hand"

4.1.4.2.2 When -ma is used with nominals which are not body part terms (with just three exceptions which are mentioned below) the meaning is: "habitually associated with". In this function -ma behaves much more like the usages of the comitative observed in other parts of Australia [Dixon ed. to appear]. It is not always so easy to interpret forms with -ma but the core meaning does appear to be "habitually associated with":

- (135) kaḍu tamul-ma
 NC:person spear(generic)-COM
 "man habitually associated with spears"

This could be a hunter or, in a modern setting, someone who spend much of his time making spears and then selling them. Loan concepts may be used with -ma:

* It is shown later [4.6.4] that ṇaḍaḍaṇiṃaḍe maṇenʸiṃa paṇnʸiḃaḍ could also be interpreted as: "When I had sore ankles I hit you who had a sore hand."

- (136) kaḍu pitʼa-ma
 NC:person picture-COM
 "man habitually associated with pictures
 ie. photographer"

- (137) kaḍu benʼdʼi-l-ma
 NC:person pencil-COM
 "person habitually associated with pencils"
 (applied to fieldworkers, including the
 writer)

More commonly the suffix is added to indigenous words;

- (138) kaḍu nanʼdʼi-l-ma
 NC:person thing-COM
 "persons habitually associated with things
 (possessions)"

This expression could be applied to a storeman or
 to a hoarder of goods.

- (139) kaḍu tungu-ma
 NC:person fire-COM
 "person habitually associated with fire"

This is rather difficult to interpret but if tungu
 is taken in its sense as a generic for "objects and
 phenomena associated with fire" [3.9.1] then the
 expression kaḍu tunguma could apply to someone with
 a lot of guns (cf. tungu gan "gun"; tungu tayi

"fire-stick ie. shotgun").

-ma is also suffixed to human nouns:

- (140) palṇun nugaḷin-ma
 woman husband-COM
 "woman habitually associated with
 husband ie. married woman"
- (141) palṇun maṇaṅga wakaḷ-ma
 woman NEG child-COM
 "woman not habitually associated with
 children, ie. childless, barren woman"

In just two cases the negative prefix, ma-, [4.1.5] appears in constructions with -ma, the combined effect being privative: "not having" or "without";

- (142) palṇun ma-kaḍu-ma
 woman NEG-NC:person-COM
 "woman without a man ie. spinster"
- (143) kaḍu ma-nan^ydyi-ma
 NC:person NEG-NC:thing-COM
 "man without possessions"

Expressions with the negative prefix, ma- and the comitative suffix operate like a normal nominal syntactically. Thus they appear with nominal inflections and universal suffixes [4.6]:

- (144) palɲun ma-kaɖu-ma-je-wa
 woman NEG-NC:person-COM-ERG-EMPH
 ɲayi-∅ pan-ɲi-baɖ
 lsg-ABS 3sg-lsg-strike
 "It was the spinster who hit me!"

It will be seen later [4.1.5] that elsewhere expressions using ma- have a very limited syntactic usage.

Expressions such as (141) also behave as a single nominal:

- (145) palɲun mananga wakal-ma-je ɲayi-∅ pan-ɲi-baɖ
 woman NEG child-COM-ERG lsg-ABS 3sg-lsg-strike
 "The barren woman hit me"

Finally there are three instances of -ma used with body part terms:

- (146) nan^yd^yi nit^yi-ma
 NC:thing arm-COM
 "thing habitually associated with arms
 ie. shirt"
- (147) nan^yd^yi lawali-ma
 NC:thing (upper)leg-COM
 "thing habitually associated with upper
 leg ie. trousers"

Significantly "man with sore (upper) legs/
thighs" is not rendered by:

- (148) *kaḍu lawali-ma
NC:person (upper)leg-COM

as would be expected [4.1.4.2.1] but by:

- (149) kaḍu lawali wiye
NC:person (upper)leg bad
"man with sore legs"

It was pointed out that kaḍu lawalima sounded like
"trouser man" which is absurd!

- (150) kaḍu ŋi-ma
NC:person penis-COM
"man habitually associated with the penis"

Native speakers described kaḍu ŋima as a "surgeon":
in fact, it refers to the person assigned the role
of circumcising at initiation ceremonies. (150)
may have other readings:

- "person with sore penis"
"person with developing penis (said of a young boy)"
"person with penis larger than the norm"

4.1.5 ma-

ma- is a negative prefix attached only to noun-classifiers. This sort of negation only appears to occur in what might be called negative existential sentences. A complete sentence may be formed by prefixing ma- to any noun-classifier in which case the noun-classifier is interpreted according to its generic sense [3.9.1]:

- (151) ma- mi
 NEG - NC:food
 "There's no food"

Such a sentence might be a response to a question such as:

- (152) n^yin^yi* mi-ka tan^yd^yin yuwu
 2sg NC:food-TOPIC 2sg have INTERROG
 "Do you have (any) food?"

A more specific question such as:

- (153) n^yin^yi mi-lawam-ka tan^yd^yin yuwu
 2sg NC:food-flour-TOPIC 2sg have INTERROG
 "Do you have (any) flour?"

prompts a correspondingly specific response in which there is a specific noun with a noun classifier with a negative prefix, ma-:

*The verb for "have" in Mulinypata behaves as an intransitive verb to the extent that although there is an object, the subject cannot have an ergative case marking.

- (154) ma-mi lawam
 NEG-NC:food flour
 "There's no flour"

Alternatively this may be expressed as:

- (155) lawam mami

or

- (156) mi lawam mami

Similarly, we have:

- (157) ma-kuja tujuik
 NEG-NC:water foam
 "There's no beer"

- (158) ma-kaɖu bukmandar
 NEG-NC:person red
 "There are no half-castes (lit. there are no
 red people)"

- (159) ma-ku kulerkurk
 NEG-NC:meat brolga
 "There are no brolgas"

- (160) ma-tʷu malandayt
 NEG-NC:weapon lightning
 "There is no lightning"

Any of the expressions exemplified by (154) follow the pattern of (155) and (156).

The residue noun-classifier, $\text{nan}^y\text{d}^y\text{i}$, follows the pattern for the other noun-classifiers.

- (161) $\text{ma-nan}^y\text{d}^y\text{i}$ $\text{ma}|\text{uk}$
 NEG-NC:thing didjeridu
 "There are no didjeridus"

but regularly substitutes mananga for $\text{manan}^y\text{d}^y\text{i}$:

- (162) mananga $\text{ma}|\text{uk}$
 NEG didjeridu
 "There are no didjeridus"

mananga , whose functions are discussed more later [4.3] may also substitute for any of the other noun-classifiers taking ma- but is not preferred.

Negative existentials using mananga may alternatively be expressed following this pattern:

- (163) $\text{ma}|\text{uk}$ mananga
 (164) $\text{nan}^y\text{d}^y\text{i}$ $\text{ma}|\text{uk}$ mananga

4.1.6 Number systems.

4.1.6.1 The cardinal numbers, in common use, are:

numi	"one"
pekengu	"two"
pekenguneme/pekengunumi	"three"
pekengupekengu	"four"
maje numi	"five" ("one hand")
dejet	"a lot"
dejetdejet	"a considerable number"

In addition there is an extended number system which is based on those in common use. This does not appear to be merely a curiosity of the contact situation since native speakers who were already young men at the time of the first significant white contact (1935) claim that the system was in use long before white contact. McConvell [personal communication] reports on an indigenous number system for Gurindji which has numbers up to forty-eight but it is thought that this is only a marginal feature of the language said to "come from the west".

The extended cardinal number system uses four primitives:

numi	"one"
pekengu	"two"
maje	"hand ie. five"
me	"foot ie five"

The first five terms are as above, followed by:

maṇenumi numi	6
hand one + one	
maṇenumi pekengu	7
hand one + two	
maṇenumi pekengunumi	8
hand one + two + one	
maṇenumi pekengupekengu	9
hand one + two + two	
maṇenumi maṇenumi	10
hand one + hand one	
maṇenumi maṇenumi menumi	11
hand one + hand one + (foot) one	
maṇenumi maṇenumi mepekengu	12
hand one + hand one + (foot) two	
maṇenumi maṇenumi mepekengunumi	13
hand one + hand one + (foot) two + one	
maṇenumi maṇenumi mepekengupekengu	14
hand one + hand one + (foot) two + two	
maṇenumi maṇenumi menumi	15
hand one + hand one + foot one	

maɣenumimaɣenumimenuminumi	16
hand one + hand one + foot one + one	
maɣenumimaɣenumimenumipekengu	17
hand one + hand one + foot one + two	
maɣenumimaɣenumimenumimenumi	20
hand one + hand one + foot one + foot one	
maɣenumimaɣenumimenumimenumimaɣenumi	21
hand one + hand one + foot one + foot one + (hand) one	
maɣenumimaɣenumimenumimenumimaɣepekengu	22
hand one + hand one + foot one + foot one + (hand) two	
maɣenumimaɣenumimenumimenumimaɣenumi	25
hand one + hand one + foot one + foot one + hand one	
maɣenumimaɣenumimenumimenumimaɣenuminumi	26
hand one + hand one + foot one + foot one + hand one + one	

and so on.

It is easy to see that there is recurring ambiguity in this number system: the forms for 11 and 15, for 21 and 25, for 31 and 35 and so on are identical^{*}. maɣe (or me) is used

* Such ambiguity can be resolved by circumlocutions in Muɣinypata just as ambiguous kin terms like "grandfather" or "uncle" in English can be disambiguated if the need arises. McConvell also reports identical forms for different numbers in Guurindji.

in either of two ways:

- (a) to indicate "five"
- (b) to mark the end of one "unit" of ten.

Each set of ten numbers appears to be treated as one unit; to simply add numi "one" to the end of maḡenumimaḡenumi "ten"

(165) *maḡenumimaḡenuminumi
"eleven"

would blur the boundary of this unit in that one would tend to associate that numi with the preceding maḡe numi (on the pattern of 6 or 26). After a "unit of ten" when one reaches five in the counting, the term maḡe (or me) numi ensures that this part of the number will not be associated with the preceding ten in the way that pekengu, for instance, would be.

The number system quickly becomes cumbersome but appears to be used with considerable facility by native speakers. One native speaker with practically no formal education readily produced the number term for "one hundred" which consists of seventy syllables!

4.1.6.2 There is a limited system of ordinals. "First", "second" and "third" are:

kumbaja	"first"; "chief"
kaṇanu	"second"; "middle"
tinayyi	"third"; "last"

4.1.7 Special Non-singulars.

Plurality is usually unmarked in Muḍinypata nominals but may be marked by reduplication [4.1.8]. For a few nouns special non-singular forms have been observed. The incorporated form of the direct object pronoun for 3 du SIB is added to the root to indicate duality:

Root	Dual form	
wakaḷ	wakaḷpunku	"child"
newuy	newuypunku	"daughter" ¹
nugaṇ	nugaṇpunku	"husband"
pugali	pugaliwunku	"cousin"
puḷima	puḷimawunku	"wife"
tamuṇ	tamuṇpunku	"grand-daughter (d.d.)"
maḍinbuyyi	maḍinpunku ²	"young girl"

For nouns with human reference, the sibling form of the pronoun is reflected in the meaning:

- (166) tamuṇ-punku
 d.d. - du SIB
 "two daughter's daughters of the same subsection"

¹ Only approximate glosses have been given for kin terms here, see Falkenberg [1962] and Stanner [1936] for details.

² This is the only instance of a change in the root in the non-singular form.

but for non-human nouns, the sibling form of the pronoun has no effect, as one would expect:

- (167) litypur-punku
 axe - "du SIB"
 "two axes"

Nouns with human reference may suffix paucal non-sibling forms of pronouns to indicate groups of a few; for example:

- (168) puɔima-wunku-ŋime
 wife-du/pc-pc FEM
 "three (or so) wives"

but nouns with non-human reference may not:

- (169) *tamul-punku-neme/ŋime
 spear-du/pc-pc MASC/pc FEM
 "three (or so) spears"

(169) perhaps does not occur since it requires the native speaker to employ a distinction (viz. sex) for nouns where such a distinction is not otherwise used.

Plural and paucal sibling forms are not used with any sort of noun. Nor are dual non-sibling pronoun forms used even with human nouns. The distributional facts, then, are puzzling; indeed this whole phenomenon must be regarded as marginal to the language since there are native speakers who would reject any of the examples above, substituting:

- (170) tamun^y pekengu
 d.d. two
 "two daughter's daughters"

for (166) and

- (171) puujima pekengunumi
 wife two-one
 "three wives"

for (168).

4.1.8 Reduplication.

Reduplication is infrequently used in MuJinypata to emphasize plurality in a nominal. An unreduplicated nominal can refer to any number of objects:

- (172) nayi lawanga pam(- $\emptyset$) - η ka η u
 lsg wallaby lsg (- 3sg)* - see
 "I saw wallaby/wallabies"

but the reduplicated nominal always refers to more than one:

- (173) nayi lawanga lawanga pam- η ka η u
 lsg wallaby wallaby lsg - see
 "I saw wallabies"

* Non-human nominals in absolutive case function are not cross-referenced by bound pronouns [4.2.] but it is difficult to decide whether or not the 3rd person singular is an exception (being $\emptyset$).

The reduplicated nominal is treated as two words (see [3.3.3]). By contrast, nominals which have what might be called inherent reduplication are treated as one word. Examples of inherent reduplication include yitt^yit "heavy", kalakkalak "cloud", putput "pregnant" and so on; such forms cannot be split any more than expressions in English such as "pell-mell" or "willy willy" can. Forms with inherent reduplication have reduplicated stress [2.2.2.1].

Of the nominals only nouns and adjectives can be reduplicated. Although the result is treated as two words, in fact it is only the latter word which may suffix nominal suffixes or universal affixes.

(173) is commonly expressed as:

(174) gayi lawanga deJet pam-ŋkaɖu
 lsg wallaby mob lsg-see
 "I saw wallabies"

4.2 Verbal Morphology

The verb in Muɲinypata is typical of the north-west of Australia in showing considerable complexity ([Birk 1974], [Metcalf 1972], [Tryon 1974], for example). The complexity arises from a relatively large number of form classes, twenty-four conjugations, together with cross-referencing bound pronouns for three major syntactic functions. Over much of Australia there are just two conjugational subtypes [Hale 1970:760], [Dixon 1972: 13-14] but Muɲinypata has a system somewhat like Ngarinyin [Coate and Oates 1970:54] in having a large number of auxiliaries. Unlike Ngarinyin Muɲinypata verb roots do not always occur with a particular auxiliary but a verb root selects a number of the auxiliaries as happens in Malak-Malak [Birk 1974:188 ff].

4.2.1 General Statement on Verb Complex.

4.2.1.1 Intransitive Verbs.

Auxiliaries provide full specification for the subject noun phrase they cross-reference together with information on tense, mood and aspect. Every verb must have one auxiliary (Aux). Most verbs have a verb root (VR) although a verb may consist of a free standing auxiliary:

- (175) ɲayi ɲuɲunu
 1sg 1sg will move
 "I will move"

In this sentence the free-standing pronoun ɲayi, "I, me" is cross-referenced into the verb in this case consisting of a single auxiliary. This verb form contains

a tense suffix, -nu, indicating future tense (FUT).

To such a form a verb root may be added:

- (176) ɲayi ɲuɟu-ɭɭɭɭ-nu
 1sg 1sg move-walk-FUT
 "I will walk"

When the subject noun phrase is changed the auxiliary form is changed because it is the auxiliary that cross-references the subject noun phrase.

- (177) nʲinʲi tuɟu-ɭɭɭɭ-nu
 2sg 2sg move-walk-FUT

We have mentioned that a verb root selects certain of the auxiliaries. A verb root, kampa, "laugh" might select the auxiliary we have seen:

- (178) ɲayi ɲuɟu-kampa-nu
 1sg 1sg move-laugh-FUT
 "I will laugh as I go"*

or another auxiliary such as that represented by

- (179) ɲayi ɲɭɭa-nu
 1sg 1sg stand-FUT
 "I will stand"

* The stiltedness of the glosses given for the verb forms in this description is by no means a reflection of the Mulinypata language but rather an indication of the inadequacy of English as a suitable medium for rendering its very compact verb morphology.

which would give:

- (180) η ayi η iJa-kampa-nu
 lsg lsg stand-laugh-FUT
 "I will laugh as I stand/I will laugh
 while I stand"

Of course some verb roots would not select this auxiliary because the combination would be semantically anomalous. Accordingly this is rejected by native speakers:

- (181) * η ayi η iJa-lili-nu
 lsg lsg stand-walk-FUT
 *"I will walk while standing"

It will be seen that there is a fixed ordering of elements in the verb. At this stage we can say:

Aux ± VR + tense marker

It will be seen later [Appendix 2] that many of the auxiliary forms in non-singular have number indicators. In general the number indicator follows the tense marker:

- (182) nekineme puJu-lili-nu-neme
 1 pc inc MASC 1 pc inc move-walk-FUT-pc MASC
 "We few (inclusive) males will walk"

Thus the schema for a verb must be expanded to include the number indicator:

Aux ± VR + tense marker + NI

4.2.1.2 Transitive Verbs.

Transitive verbs also have cross-referencing bound pronouns denoting direct objects. Thus the final description of the verb must have an additional slot:

- (183) ɲayi-je nʎinʎi-ø ɲu-nʎi-baɖ-nu
 1sg-ERG 2sg-ABS 1sg-2sg-strike-FUT
 "I will hit you"

The bound direct object pronominal forms are invariant (in any one tense) so that their description [4.2.1.2.A] is considerably less complex than that of the subject pronouns.

The bound direct object pronominal forms are as follows:

	<u>Base</u>	<u>Number Indicator (NI)</u>
1 sg	ɲi	
2 sg	nʎi	
3 sg	ø	
1 du inc MASC	nʎi	ninda
1 du inc FEM	nʎi	ɲinda
1 du SIB	ɲanku	
1 du exc MASC	ɲanku	ninda
1 du exc FEM	ɲanku	ɲinda

	<u>Base</u>	<u>Number Indicator (NI)</u>
2 du MASC	nanku	ninda
2 du FEM	nanku	ɲinda
2 du SIB	nanku	
3 du MASC	wunku/nku *	ninda
3 du FEM	wunku/nku	ɲinda
3 du SIB	wunku/nku	
1 pc inc MASC	nɣi	neme/name
1 pc inc FEM	nɣi	ɲime
1 pc SIB	ɲan	
1 pc exc MASC	ɲanku	neme/name
1 pc exc FEM	ɲanku	ɲime
2 pc MASC	nanku	neme/name
2 pc FEM	nanku	ɲime
2 pc SIB	nan	
3 pc MASC	wunku/nku	neme/name
3 pc FEM	wunku/nku	ɲime
3 pc SIB	wun/n	
1 pl	ɲan	
2 pl	nan	
3 pl	wun/n	

4.2.1.2.A Direct Object Pronominal Forms.

* nku and n occur in verb forms in the future tense and forms based on the future tense [4.2.3]. wunku and wun occur elsewhere.

In addition an indirect object may be cross-referenced into the verb complex by a bound pronominal form, for instance:

- (184) ḡayl-je nukunu- $\emptyset$ ḡu-mba-baḡ-nu
 1sg-ERG 3sg MASC-ABS 1sg-2sg BEN-strike-nu
 nʸinʸi-nu
 2sg-DAT
 "I will hit him for you"

There is one structural position for two quite different forms: direct object bound pronouns and indirect object (called benefactive (BEN) henceforth) bound pronouns. The benefactive bound pronoun is used whenever that structural position is "vacant" ie. when there is no direct object to be expressed (see "middle" verbs [4.2.6]) or in the special case when the direct object bound pronominal form is morphologically zero. To put it another way benefactive bound pronouns are not prefixed to the verb root if there is an overt morpheme in the structural position they may occupy. (184) is acceptable because the direct object bound pronoun is / $\emptyset$ / but (185) is unacceptable:

- (185) *ḡayl-je nʸinʸi- $\emptyset$ ḡu-na-baḡ-nu
 1sg-ERG 2sg-ABS 1sg-3sg MASC BEN-strike-FUT
 nukunu-nu
 3sg MASC-DAT
 "I will hit you for him"

This sentence must be rendered by:

- (186) ḡayi-je nʸinʸi-ø ḡu-nʸi-baḡ-nu
 1sg-ERG 2sg-ABS 1sg-2sg-strike-FUT
 nukunu-nu
 3sg MASC-DAT
 "I will hit you for him"

The benefactive bound pronominal forms are as follows:

	<u>Base</u>	<u>Number Indicator (NI)</u>
1sg	ḡa	
2sg	mba	
3sg MASC	na	
3sg FEM	ḡe	
1 du inc	nʸe	
1 du exc MASC	ḡaju	ninda
1 du exc FEM	ḡaju	ḡinda
1 du exc SIB	ḡaju	
2 du MASC	naʸu	ninda
2 du FEM	naʸu	ḡinda
2 du SIB	naʸu	
3 du MASC	wiʸu/ʸu *	ninda
3 du FEM	wiʸu/ʸu	ḡinda
3 du SIB	wiʸu/ʸu	

* ʸu and ʸa occur in verb forms in the future tense and forms based on the future tense [4.2.3]. wiʸu and wiʸa occur elsewhere.

	<u>Base</u>	<u>Number Indicator (NI)</u>
1 pc inc MASC	nʏe	neme/name
1 pc inc FEM	nʏe	ɲime
1 pc SIB	ɲaɲa	
1 pc exc MASC	ɲaɲu	neme/name
1 pc exc FEM	ɲaɲu	ɲime
2 pc MASC	naɲu	neme/name
2 pc FEM	naɲu	neme/name
2 pc SIB	naɲa	
3 pc MASC	wiɲu/ɲu	neme/name
3 pc FEM	wiɲu/ɲu	ɲime
3 pc SIB	wiɲa/ɲa	
1 pl	ɲaɲa	
2 pl	naɲa	
3 pl	wiɲa/ɲa	

4.2.1.2.B Benefactive Pronominal Forms

At this stage a tentative schema for the Muljinyata transitive verb can be set up as:

$$\text{Aux} + \left[\begin{array}{c} \text{Direct Object} \\ \text{Benefactive} \end{array} \right] + \text{VR} + \text{tense marker}$$

As before many non-singular forms have a number indicator:

(187) η ankuneme- λ e $n\gamma in\gamma i-\phi$ $\eta u-n\gamma i$ -ba $\dot{q}$ -nu-neme
 1 pc exc MASC-ERG 2sg-ABS 1 pc-2sg-strike-FUT-pc MASC
 "We few (exclusive) males will hit you"

(188) η ayi- λ e nankuneme- ϕ ηu -nanku-ba $\dot{q}$ -nu-neme
 1sg-ERG 2 pc MASC-ABS 1sg-2 pc-strike-FUT-pc MASC
 "I will hit you few males"

In (187) and (188) the number indicator is neme. What happens when the subject and either the direct or indirect object require a number indicator?

(189) η ankuneme- λ e nankuneme- ϕ
 1 pc exc MASC-ERG 2 pc MASC-ABS
 ηu -nanku-ba $\dot{q}$ -nu-neme
 1 pc-2 pc-strike-FUT-pc MASC
 "We few (exclusive) males will hit you few males"

This shows that one of the two NI's is deleted but it is only by examining expressions such as:

(190) η ankunime- λ e nankuneme- ϕ
 1 pc exc MASC-ERG 2 pc MASC-ABS
 ηu -nanku-ba $\dot{q}$ -nu-neme
 1 pc-2 pc-strike-FUT-pc MASC
 "We few (exclusive) at least one of whom is female will hit you few males".

- (191) η ankuneme- η e nankunime- $\emptyset$
 1 pc exc MASC-ERG 2 pc FEM-ABS
 η u-nanku-ba η -nu- η ime
 1 pc-2 pc-strike-FUT-pc FEM
 "We few (exclusive) males will hit you few
 at least one of whom is female"

that it becomes clear that the NI of the subject is
 deleted if there would otherwise be two NI's.

The schema for the transitive verb must be expanded to
 include the NI:

$$\text{Aux} + \left\{ \begin{array}{l} \text{Direct Object} \\ \text{Benefactive} \end{array} \right\} + \text{VR} + \text{tense marker} + \text{NI}^*$$

This schema must be further expanded to include incorporated
 body part terms [4.1.4.1.A] (henceforth abbreviated as
 BP) since these may appear in a verb form:

- (192) η ayi- η e t η e n η in η i η u-n η i-ye-ba η -nu
 1sg-ERG ear 2sg 1sg-2sg-ear-strike-FUT
 "I will hit your ear; I will hit you in the ear"

The schema becomes:

$$\text{Aux} + \left\{ \begin{array}{l} \text{Direct Object} \\ \text{Benefactive} \end{array} \right\} + \text{BP} + \text{VR} + \text{tense marker} + \text{NI}$$

* Some verbs require the dual NI to immediately follow the direct
 object/benefactive; others allow the NI to immediately precede
 the tense marker.

Note that this "final" schema for a transitive verb differs markedly from that of the intransitive verb. Of special importance is the fact that intransitive verb forms do not require a verb root: this fact derives from the nature of the auxiliaries which we will now look at in depth.

4.2.2 General Statement on Auxiliaries.

Auxiliaries in Muɿinypata are of two types:

- (a) those which generally occur with intransitive verbs.
- (b) those which generally occur with transitive verbs.

There is therefore a weak test for transitivity in Muɿinypata but it should be stressed that it is weak.

Most (a)-type auxiliaries may appear without a verb root; none of the (b)-type auxiliaries can appear without a verb root. All the (a)-type auxiliaries which can occur without a verb root can be assigned a lexical meaning and this meaning to some extent reflects their meaning when in combination with a verb root. The situation with (b)-type auxiliaries is far less clear-cut.

Free pronouns in Muɿinypata have twenty-eight forms [4.1.1.B]. Each auxiliary has a distinctive paradigm for each of its tenses [4.2.3] which includes twenty seven forms corresponding to the free pronouns but with the sex distinction in third person singulars neutralised.

The paradigms of the auxiliaries are provided in Appendix 2.

Auxiliaries of type (a) are labelled like lexical items but in capitals, thus (176) becomes:

- (193) *ɲayi-ϕ ɲuɲu-lili-nu*
 1sg-ABS 1sg MOVE-walk-FUT
 "I will walk"

Auxiliaries of type (b) are simply assigned Roman numerals until further semantic specification can be given. Thus (183) becomes:

- (194) *ɲayi-ɲe nʲinʲi-ϕ ɲu-nʲi-baɖ-nu*
 1sg-ERG 2sg-ABS 1sg VIII-2sg-strike-FUT
 "I will hit you"

Before turning to an analysis of the auxiliary forms tense and mood will be more fully explained.

4.2.3 Tense and Mood

4.2.3.1 Tense

Muɲinypata has a three-term tense system:

Future	(FUT)
Perfect	(PERF)
Imperfect	(IMPERF)

In fact it is appropriate to speak of a two-way distinction future vs. non-future, non-future making a distinction between uncompleted action in the past and action which

is not uncompleted in the past. What has been labelled as perfect in fact refers to present time whether the action is completed or not and to past time just in case the action has been completed.

The forms are:

FUT	nu
PERF	$\left\{ \begin{array}{c} m \\ n \end{array} \right\}^*$
IMPERF	da

* See auxiliary paradigms, Appendix 2.

4.2.3.2 Mood

Three moods are distinguished:

indicative
imperative
subjunctive

The indicative mood has already been exemplified in the paradigms.

Imperative forms are identical to future indicative forms, for instance

(195) nankuninda-ka tuju-nu-ninda
 2 du MASC-TOPIC 2 du MOVE-FUT-du MASC
 "You two (non-sibling males), be off!"

The subjunctive mood is evidenced in two tenses: future and non-future. The future positive subjunctive has the same form as the future negative indicative [4.2.4] except that the negative particle, *maḍa*, does not appear and the subjunctive particle *nukun* appears. The non-future subjunctive is the same as the past negative except that it does not have the negative particle, *maḍa*. Subjunctives are used to describe hypothetical states or actions rather than actual events.

4.2.4 Negation in Verbs.

Negation is marked by a negative particle, *maḍa*.

Future Negative Indicative is based on the Future Positive Indicative, with nu omitted and the addition of the particle, nukun.

- (196) ḡayḡ ḡuḡu-nu
 lsg lsg MOVE-FUT
 "I will go"

- (197) ḡayḡ maḡa ḡuḡu nukun
 lsg NEG lsg MOVE IRREALIS*
 "I will not go"

In addition, there is a change in the initial segment of many of the third person forms of the auxiliaries. Initial p becomes k except in the first group of transitive type verbs:

- (198) nukunu maḡa kuḡu nukun
 3sg MASC NEG 3sg MOVE IRREALIS
 "He will not go"
- (199) nukunu-je pelpitʸ nʸinʸi-ø pa-nʸi-we-yeytʸ-nu
 3sg MASC-ERG head 2sg-ABS 3sg I-2sg-head-shave-FUT
 "He will shave your head".

*The term, IRREALIS, is adopted as a cover term for this particle which signals future subjunctive and future negative: it signals states and actions which will not actually occur.

- (200) nukunu-je pelpit^y n^yin^yi-~~ø~~ maḍa
 3sg MASC-ERG head 2sg-ABS NEG
 ka-n^yi-we-yeyt^y nukun
 3sg-2sg-head-shave IRREALIS
 "He will not shave your head"

A future positive subjunctive is based on the future negative indicative (without maḍa):

- (201) nukunu-ka kuju katu nukun ḡata
 3sg MASC-TOPIC 3sg MOVE towards IRREALIS CONDITIONAL
 ḡayi-wa ḡuju nukun waḡu
 1sg-EMPH 1sg MOVE IRREALIS away
 "If he were to come, I would go. (ie., if he were to move towards I would move away)"

The future negative subjunctive is identical to the future negative indicative but context makes it clear what is meant.

Imperatives in the negative have the same form as the corresponding second person negative indicative form.

Perfect negative indicative is exactly the same as the future negative indicative but with nukun omitted.

Past negatives are rather more complicated. Among the intransitive-type auxiliaries, SIT, STAND, LIE, BE ALOFT and DO are identical to the imperfect (positive) paradigm, BECOME is identical to the auxiliary base forms of its

future positive paradigm but with da substituted for nu.
 MOVE, USING FOOT, HAVE and HAB are irregular and are given
 in the appendix.

The transitive type auxiliaries form their past negatives
 in no very consistent way. The forms are shown in the
 appendix.

The non-future negative subjunctives are identical to
 the past negatives.

4.2.5 Analysis of Auxiliaries.

Each auxiliary paradigm can be analysed in terms of:

- (a) six "principal parts"* viz. the three singular
 and three plural forms (for each tense).
- (b) a set of rules for deriving the remainder of the
 paradigm from the "principal parts".

4.2.5.1 Rules for so-called "intransitive"-type auxiliaries.

4.2.5.1.1 Formation of duals.

- 1. 1 du inc (SIB) = 3 sg for future tense.
 2 sg for perfect and imperfect

*The term, principal parts, is borrowed from traditional grammarians
 of Latin and Greek who likewise presented a small number of
 key forms from which many other forms could be derived according
 to stated rules, eg. Goodwin [1894:93].

2. 1 du exc non-SIB, 2 du non-SIB, 3 du non-SIB are based on the corresponding plural form plus a dual number indicator. For perfect tense, ka is added to the plural form. There are a number of exceptions to this rule.

4.2.5.1.2 Formation of paucals.

1(a) 1 pc inc SIB = 1 pc exc SIB = 1 pl.

(b) 2 pc SIB = 2 pl

(c) 3 pc SIB = 3 pl

2. 1 pc inc non-SIB = 1 du inc non-SIB + paucal number indicator.

3. Other pc non-SIB's = du non-SIB + paucal number marker.

The paradigms for BECOME provide an instance of these five rules at work (consider the past negative as imperfect in form).

4.2.5.1.3 Statement of Exceptions.

However there are many exceptions to the basic rules laid down for intransitive auxiliaries.

All the perfect tense paradigms are regular with the exception of STAND. A distinction is made between 3 pc SIB kibim and 3 pl pibim; this is the only instance of such a distinction in form. 3 du SIB is based on 3 pc SIB with ka added while 3 pc non-SIB is based on 3 pl plus ka, not on the

3 du SIB form as the rules would predict.

The future and imperfect paradigms are much more irregular. The auxiliaries, LIE, BE ALOFT, DO, HAVE, BECOME and SAY/DO all have regular paradigms in the future and imperfect.

The future paradigms of SIT and HAB are irregular in that 1 du exc SIB, 2 du SIB and 3 du SIB are based on the corresponding singular forms with the final vowel of the Aux Base changed from i to e. The future of USING FOOT is similarly irregular but the final vowel of the Aux Base in each singular form is changed from u to a. The future of MOVE does not base the 1 du exc SIB, 2 du SIB and 3 du SIB forms on the plurals but has suppletive forms na, na, pa. In addition, a unique distinction is made between 1 pc inc SIB and 1 pc exc SIB, the 1 pc inc SIB being identical to 3 du SIB while 1 pc exc SIB is regularly formed.

The imperfect paradigms likewise become irregular when the 1 du exc SIB, 2 du SIB and 3 du SIB are not based on the plurals as the rules predict. For SIT, STAND, MOVE, USING FOOT and HAB, these forms are based on the plurals but with the final vowel of the Aux Base is changed to /e/. The 1 du exc SIB of SIT is ɲiɲineda where *ɲaɲineda would be predicted; the 1 pc exc non-SIB are based on the expected 1 du exc SIB *ɲaɲineda.

4.2.5.2 Analysis of "transitive-type" auxiliaries.

It is useful to distinguish three groups of "transitive-type" verbs:

Group 1	I - VII
Group 2	VIII
Group 3	IX - XIII

4.2.5.2.1 The first group of "transitive-type" auxiliaries, I-VII, follow the rules for the intransitive-type auxiliaries. The element, ka, which appears in some forms of the perfect paradigm, is deleted in this group of verbs whenever there is a phonologically overt cross-referenced pronominal object (whether direct or indirect) in the verb complex. For an example of this process see the perfect paradigm of "strike" (Aux:I) in Appendix 2.

4.2.5.2.2 The second group of transitive-type auxiliaries has one member, VIII, which conjugates like the first group but has two special features:

ka is optionally deleted when there is an overt pronominal object (the deletion was obligatory in the first group).

the plurals of the perfect paradigm are based on the first singular perfect form with the addition of num (1 pl), num (2 pl), pum (3 pl). This is quite similar to the third group.

4.2.5.2.3 The third group is characterised by its formation of the plurals. For each of the three basic tenses, the first singular of that tense is used as the base for the plural a prefix being added to the base as follows:

nu + 1 sg = 1 pl

nu + 1 sg = 2 pl

pu + 1 sg = 3 pl

It will be noticed that for each of the five types of auxiliaries (IX-XIII) in the third group, the first singular and third singular forms are identical. Thus the principal parts could be reduced to two: 1 sg, 2 sg (or 2 sg, 3 sg) and then giving two rules specific to this group, the one just stated and

1 sg = 3 sg

In the third group, XIII poses a problem since it behaves like other members of its group but differs from any of the other transitive-type auxiliaries in that it can be seen to have a lexical meaning: USING HAND and may occur without a verb root. When it appears without a verb root it normally has the meaning: "say" or "talk to":

- (202) η ayi- ϕ nankuninda-nu
 1sg-ABS 2 du MASC-DAT
 me-na η u-da-ninda
 1sg XIII-2 du BEN-IMPERF-du MASC
 "I was talking to you two non-sibling males".

Marginally acceptable is a reading "I was making it/doing it (using my hands) for you two non-sibling males", but more usual is a form using a verb root:

- (203) η ayi-ka nankuninda-nu
 1sg-TOPIC 2 du MASC-DAT
 me-na η u-wata-da-ninda
 1sg XIII-2du BEN-make/do-IMPERF-du MASC
 "I was making it for you two non-sibling males".

XIII is intermediate between the intransitive and transitive type auxiliaries. The fact that it has a recognisable meaning when behaving as a transitive type auxiliary:

- (204) η ayi- η e tamal n η in η i
 1 sg-ERG neck 2sg
 mam-n η i-tama-yeyt η
 1 sg XIII (USING HAND) PERF-2sg-neck-cut
 "I cut your neck (throat)"*

* Note that the initial η of the verb root is actually η_2 so that according to MP-4 [2.1.10.17] we have mam η eyt η "I cut him" (from *mam + η_2 eyt η).

is probably deceptively atypical for the transitive type auxiliaries. Native speakers were readily able to characterise this auxiliary whereas attempted characterisations of other auxiliaries were found to have numerous exceptions. It may be that the other auxiliaries have no semantic motivation by which they select particular verb roots or that the semantic bases are covert categories in Mulinypata (see [6.5]).

4.2.5.3 Analysis of Auxiliary Bases.

No attempt is made to provide an analysis the auxiliary "bases" into numerous parts although a glance at the auxiliary paradigms (Appendix 2) will show that this is possible. What has resulted so far in each attempt is an analytical machinery which hardly justifies the effort.

For instance, an analysis of USING FOOT might progress along these lines:

Each form consists of:

- (a) personal prefix eg. η = 1 sg.
- (b) an auxiliary root eg. un = USING FOOT.
- (c) a suffix to the auxiliary root which further specifies person and number eg. e = 1 du exc SIB, 2 and 3 du SIB; 1 pc exc non-SIB, 2 and 3 pc non-SIB (for past negative and imperfect paradigms only).

Even for this auxiliary which is not especially irregular (compared to SIT, for instance) an additional auxiliary root, uw, has to be posited just for the third singular and third dual non-sibling forms of the past negative paradigms.

The suffix to the auxiliary root in the perfect paradigm of USING FOOT is

uŋam/uŋamka

These forms can be further analysed as:

uŋa	marks perfect paradigm of USING FOOT
m	perfect tense marker (akin to nu and da).
ka	dual sibling and paucal non-sibling forms except 1 inc.

Perhaps we would also posit a zero morpheme which contrasts with ka in a particular structural position.

However this "solution" still has problems since the third singular and third dual non-sibling pronouns for the perfect paradigm do not have un as their auxiliary root unless we claim a rule which deletes u of the root for 3 sg and 3 du non-SIB forms. Suppose then that we alter the analysis and posit /n/ as the auxiliary root then 3 sg becomes:

- ϕ 3 sg personal prefix.
- n Aux root: USING FOOT.
- uŋa Special (for USING FOOT) perfect tense marker.
- m General perfect tense marker.

As much as it was appropriate to evaluate competing analyses in the treatment of morphophonological alternation [2.1.10] alternative solutions with greater analytic possibilities than the ad-hoc offerings above must be evaluated against stated criteria. A casual glance at the paradigms (in Appendix 2) suggests that three separate roots will have to be posited for the future of MOVE; the roots for the future paradigms of SIT and DO might be i_1 or ϕ and even if one did not have to resort to i_1 vs i_2 or ϕ_1 vs ϕ_2 to distinguish them problems would arise from the plural forms of the imperfect paradigm of STAND. It is proposed, therefore, to treat what have been called auxiliary bases as portmanteau morphemes without entering into their internal composition, an exercise of dubious value in this case.

However some informal observations are made on the initial segments and their correlation with pronominal cross-reference. In general, 1 sg and 1 pl forms have ŋ as their initial segment: this is so for all the intransitive-type auxiliaries and the first group of transitive-type auxiliaries. The exceptions occur in the third group of transitive type auxiliaries and in the perfect paradigm of the second group.

The exceptions have as initial segment:

p, b, or m

In general it can be said that any 1 pl auxiliary (and all the forms derived from it) has initial ŋ while any 1 sg auxiliary has an initial peripheral stop or nasal, most commonly ŋ.

The 2 sg and 2 pl forms are not so regular. The possibilities are: t, tʸ, d, n. Significantly, t only occurs before low vowels while tʸ only occurs before high vowels. Distributional facts of this sort lend credence to the interpretation of stop phonemes adopted by Street and Street [2.1.8].

2 pl always has an initial n; in 2 sg, initial d and n occur infrequently, the other auxiliaries having initial, t or tʸ.

The 3rd sg and 3rd pl forms most often appear with an initial peripheral stop, p, b, k but the exceptions of which there are many do not appear to follow any particular pattern: t d ɖ m n w y.

4.2.5.4 Examples of usage of "Intransitive-type" Auxiliaries with Verb Roots.

SIT This auxiliary may indicate that the agent is sitting down otherwise it can mean that there is just one action involved (cf. HAB, STAND, MOVE).

VR murk "eat"

FUT η imurknu I will eat; I will eat while sitting.

PERF η emmurk I am eating. I have eaten.

IMPERF η inimurkda I was eating.

HAB

(a) action takes place over a period of time (continuative).

(b) action is repeated frequently.

VR pad "abandon, leave behind".

FUT η anipadnu I shall leave (it) behind for a time;
 I shall often leave it behind. (For
 example, said of money kept in a bank).

(205) η ayi-ka nan^ydyi pa^yir η ani-pad-nu
 1sg-TOPIC NC:thing rock 1 sg HAB-abandon-FUT
 η aua η a bank
 LOC place bank
 "I'm going to make a habit of leaving my
 money behind in the bank".

PERF η anampad "I left (it) behind".

IMPERF η a η ima η an^yu η da "I was continually looking for
 sugarbag".*

(VR = ma η an^yu η "seek sugarbag")

STAND

(a) agent is standing .

(b) a continuous course of action

*Nugeman^y text. Appendix 4.

(206) ɲiJa-murk-nu
 1 sg STAND-eat-FUT
 "I will eat while standing"

(207) ɲiJa-pudʏ-nu
 1 sg STAND-throw away-FUT
 "I shall throw (it) away frequently"

MOVE

- (a) agent is moving about
 - (b) habitual action
- ɲuɹumurknu "I will eat as I go; I will
 go about eating"

USING FOOT

action (generally) involves the foot.

(208) ɲunu-paɭ-nu
 1 sg USING FOOT -break-FUT
 "I will break it with my foot (as breaking
 something by treading on it)".

(209) ɲunuɲam-nʏi-baɖ
 1 sg USING FOOT PERF-2 sg-strike
 "I struck you using my foot ie. I kicked you".

BE ALOFT

- (a) agent is aloft.
- (b) action involves some object being aloft.

ɲindamurknu "I will eat while aloft (eg up a tree)"

ɲindakilkkilknu "I will hold on (to an object)
above (my head)"

LIE

agent is lying down.

- (210) ɲumurknu "I will eat while lying down"
ɲu-pup-nu "I will die (literally "I will
1 sg LIE-lie-FUT lie down while lying down")".

DO

action is not specified very closely compared to the
other auxiliaries.

- (211) ɲi-pup-nu
1 sg DO-lie-FUT
"I will lie it down (flat)"

HAVE

agent takes up or gains possession of something
involved in the action.

- (212) ɲanʔdʔin-maɖawitʔ
1 sg HAVE PERF-take up
"I took (it) up".

SAY/DO and BECOME

These have not been seen to appear with verb roots but
behave like the other auxiliaries in their paradigms.

4.2.6 Impersonal Verbs.

Impersonal verbs in Mulinyata are of two types:

- (i) having an overt but inanimate subject.
- (ii) having no subject stated at all.

4.2.6.1 Inanimate subjects.

Inanimate nominals may appear with the ergative-instrumental case-marking in the examples given below: the case-marking is interpreted as signalling ergative function in that the norm position for such noun phrases is the same as the norm position for noun phrases which are recognizably ergative. Compare:

- (213) lalingin-te nayi- ϕ dam-ni-win^yimadapa
 sea-ERG lsg-ABS 3sg I PERF-lsg-oppose
 "The sea opposed me; I went against the tide".

with

- (214) nukunu-je nayi- ϕ dam-ni-win^yimadapa
 3sg MASC-ERG lsg-ABS 3sg I PERF-lsg-oppose
 "He opposed me ie. he refused me, he said no to me".

Other examples are:

- (215) kuja-re nayi- ϕ dam-ni-me-tut
 water-ERG lsg-ABS 3sg I PERF-lsg-foot-cover
 "Water covered my feet".

- (216) kuja-je ɲayi-ø ba-ɲi-me-lip-nu
 water-ERG lsg-ERG 3sg IX-lsg-foot-cool-FUT
 "Water will cool my feet"
- (217) tungu-je ɲayi-ø pa-ɲi-ɟi-yeyek-nu
 fire-ERG lsg-ABS 3sg I-lsg-buttocks-affect^{*}-FUT
 "Fire caused me to fart or defecate"
- (218) tungu-je nan^yd^yi glas-ø pe-ø-bukaɪ-nu
 fire-ERG NC:thing glass-ABS 3sg "I"-3sg-melt-FUT
 "Fire melted the glass"

In (218), the vowel, a, of the auxiliary base becomes e.
 The motivation for this change (which also occurs for impersonal verb forms in other conjugations) is not yet known.

4.2.6.2 Impersonal verbs without subjects.

This construction appears to apply just to physical conditions of human beings: similar constructions appear in neighbouring languages [Hoddinott and Kofod, 1976]

- (219) dam-ɲi-bu-la
 3sg I PERF-lsg-upper leg-cramp
 "I have a cramp in my upper leg"

* yeyek appears to be frozen with a particular incorporated body part to give the particular meaning: "cause to fart or pass solid excretion". yeyek does not appear without ɟi.

- (220) pamar ṇayi-ϕ pa-ṇi-we-ded-nu
 head hair lsg-ABS 3sg I-lsg-head-ruffle-FUT
 "My (head) hair will be ruffled"

- (221) ṇayi-ϕ dam-ṇi-kuley
 lsg-ABS 3sg I PERF-lsg-(cause to) belch
 "I belched (ie. ? it caused me to belch)"

Again there can be a change of vowel in the auxiliary
 base from a to e; it is difficult to see what motivates
 this. Compare:

- (222) ṇayi-ϕ dam-ṇi-luṇ
 lsg-ABS 3sg I PERF-lsg-(cause to) shiver
 "I shivered"

with

- (223) dem-ṇi-jur^{*}
 3sg "I" PERF-lsg-(make) hot
 "I am hot; it heats me"

and

- (224) ba-ṇi-me-bur-nu
 3sg IX-lsg-foot-cold-FUT
 "My feet will feel cold"

*The usual Muliñypata word for "hot" is dendur, presumably arising
 from *dem-ϕ-jur [2.1.10.17] "it is hot".

4.2.7 Middle Verbs.

Some verbs in Muɔinypata can be described as "middle verbs" ie. they can only govern an indirect object never a direct object. The subjects of such verbs cannot appear with an ergative case-marking: they take the unmarked absolutive case-marking:

- (225) nekiŋime-ϕ puma-ɔu-nu-ninda
 1 pc inc FEM-ABS 1 pc inc XIII-3 du BEN-FUT-du MASC
 peninda-nu
 3 du MASC-DAT
 "We few inclusive one of whom is female will talk
 to them two non-sibling males"

- (226) ɲayi-ϕ ɲa-ɲe-windipaɪ-nu-ɲani
 1sg-ABS 1sg I-3sg FEM BEN-berate-FUT-1sg HAB
 niɲunu-nu
 3sg FEM-DAT
 "I will berate her continuously"

4.2.8 Reflexives

Reflexives are generally signalled by a change in the auxiliary base. Usually this is a change in the final vowel of the auxiliary base, for instance:

- (227) ɲayi-ɲe maɲe nʸinʸi-ϕ ma-nʸi-ma-puɪ-nu
 1sg-ERG hand 2sg-ABS 1sg XIII-2sg-hand-wash-FUT
 "I will wash your hand(s)"

- (228) $\eta a y i - \emptyset$ $m a n e - \emptyset$ $m e^* - m a - p u | - n u$
 lsg-ABS hand-ABS lsg XIII (REFL)-hand-wash-FUT
 "I will wash my (own) hand(s)"

Otherwise the reflexive is marked by a prefix which immediately follows the Aux Base, for example:

- (229) $\eta a y i - j e$ $m a n e$ $n y i n y i - \emptyset$ $\eta i j a - n y i - m a - b a y d y - n u$
 lsg-ERG hand 2sg-ABS lsg II-2sg-hand-look-FUT
 "I will look at your hand(s)"

- (230) $\eta a y i - \emptyset$ $m a n e - \emptyset$ $\eta i j a - n u - m a - b a y d y - n u$
 lsg-ABS hand-ABS lsg II-REFL-hand-look-FUT
 "I will look at my (own) hand"

Often a reflexive form will show a change of vowel in the Aux Base and the use of the reflexive prefix:

- (231) $\eta a y i j e$ $m a n e$ $n y i n y i$ $\eta i j a n y i m a b a y d y d a n i n i$
 "I was looking at your hand(s)"

- (232) $\eta a y i$ $m a n e$ $\eta i j i n u m a b a y d y d a n i n i$
 "I was looking at my (own) hand(s)"

*Recalling [4.2.5] it would be reasonable in analysing the Aux Base to claim that a = non-reflexive contrasting with e = reflexive, while m = lsg subject contrasting with n = 2sg subject: what is left over viz. $\emptyset$ presumably is the Aux root but note that this $\emptyset$ must be distinguished from any other $\emptyset$ in this structural position.

There is no simple pattern for the formation of the reflexives in the various conjugations. The auxiliaries, II, III, V, VI and X use the reflexive prefix, nu, and the only one of the intransitive-type auxiliaries for which reflexives have been elicited viz. HAVE has nu with no other change:

- (233) nukunu- ϕ kan^yd^yin-nu-ma ϕ a
 3sg MASC-ABS 3sg HAVE PERF-REFL-chest
 "He is holding it to his breast"¹

The principal parts of the paradigms for the reflexives are listed in Appendix 3.

4.2.9 Reciprocals.

4.2.9.1 Reciprocals have the same form as reflexives, lacking of course any singular forms.

- (234) η ayi- η e nan^yd^yi- ϕ pa-mba-mudmud-nu
 1sg-ERG NC:thing-ABS 1sg I-2sg BEN-give-FUT
 n^yin^yi-nu
 2sg-DAT
 "I will give it to you"

- (235) neki nan^yd^yi penumudmudnu²
 "You and I will give each other things"

¹ Also nigunu kan^yd^yinuma ϕ a "She nurses (a baby)"

² It might be expected that the reciprocal subject of a three place-predicate would allow an ergative marking. Unfortunately, there is no conclusive answer since ergative markings are always sparingly used and never spontaneously in this context.

4.2.9.2 Reciprocal Verbs.

Muɔɪnypata has some verbs which can be described as reciprocal verbs as English has some verbs which require a plural subject eg. assemble (intransitive). Such verbs require a non-singular subject, for instance:

- (236) ɲankuninda-ø ɲem-ninda-ɟiyitʲi
 1 du MASC-ABS 1 du (RECIP) PERF-du MASC-argue
 "We two exclusive non-sibling males argued
 with each other; he and I argued (heatedly)"

Suggested forms such as:

- (237) *ɲayi ɲendiyitʲi
 "I argued with myself"

were rejected (as one would expect) by native speakers.

4.2.9.3 Distinguishing between Reflexives and Reciprocals.

Contexts occasionally arise (or can be easily constructed) in which the congruence in form of reflexives and reciprocals leads to ambiguity.

- (238) ɲankuninda paŋkin ɲumem-daɟi-puɭ-ninda*
 1 du MASC back 1 du (REFL/RECIP) PERF-back-wash-du MASC
 "He and I washed our backs"

* This becomes ɲumenaɟipuɭ by MP-6 and MP-9 [2.1.10.17].

OR "He and I washed each others' backs"

There are two methods employed in Mujinypata to resolve this sort of ambiguity. The first is to split up the offending sentence, for instance:

(239) ḡayika paḡkin menaḡipu! nukunuwa menaḡipu!

"I washed my (own) back and he washed his"

(240) ḡayiḡe paḡkin nukunu menaḡipu! nukunuḡe paḡkin

ḡayi mamḡidaḡipu!

"I washed his back and he washed mine".

However this method is plainly impractical when there is an unlimited number of individuals involved:

(241) ḡanki paḡkin ḡumenaḡipu!

"We all each washed our own backs"

OR

"We all washed each others' backs"

To resolve this ambiguity, Mujinypata uses an idiom involving maḡe "hand":

(242) ḡayi-ka ḡi-nu-ḡi maḡe-ḡayi

1sg-TOPIC 1sg DO-FUT-1sg SIT hand-1sg

"I will do it (by) myself; I will do it 'under my own steam'"

maŋe with a suffixed personal pronoun form referring to the subject stresses that the agent is responsible for the action of the verb.

When this device is used with expressions such as (241) it engenders a reflexive reading:

(243) ŋanki paŋkin ŋumenaɿipu! maŋeŋanki
 "We all each washed our own backs"

4.2.10 Secondary Auxiliary.

"Intransitive-type" auxiliaries can be suffixed to a verb form to qualify the action of the main verb:

(244) ŋayi-ka maɖa me-maɖa-pul-nu-ŋu
 1sg-TOPIC belly 1sg XIII (REFL)-belly-wash-FUT-1sg LIE
 "I will wash my belly while I'm lying down"

The auxiliaries used most frequently in this way are:

- SIT indicating agent is seated or that a single action is involved.
- HAB indicating habitual mode of action.
- STAND indicating agent is standing, or, more commonly, a repeated action.
- MOVE indicating motion.

There is not a great deal of difference between the qualification given to a verb by HAB and STAND but particular verbs appear to prefer one over the other. No principled motivation has been discovered for this preference.

4.2.11 Reduplication in Verbs.

Reduplication in the verb in Muɬinypata generally signals repeated action. Thus (217) has the verb root reduplicated when there is repeated action:

(245) tunguɬe ɣayi paŋiɬiyeyektʷeyeknu^{*}

"Fire caused me to fart or defecate many times"

This sort of reduplication should be distinguished from inherent reduplication where a form contains like parts but cannot be split up. Thus kilkkilk "hold up" in (never appears as *kilk. The sort of reduplication in (246) can be viewed as a process of converting a root into its reduplicated form: mel "squash" becomes melmel "squash repeatedly" in reduplicated form:

(246) ɣayi ɣandameimelnugi

"I will squash it repeatedly (by sitting on it)"

Apart from total reduplication, partial reduplication occurs, for instance; ɣuɣuɬurnu "I will pull it" becomes

(247) ɣayi ɣuɣuɬuɬurnu

"I shall pull it repeatedly"

Partial reduplication of this sort is quite obvious but much of this process is far less obvious in the signalling of repeated action in Muɬinypata verbs. For instance,

* y is hardened to tʷ by the preceding stop.

- (248) ɲayɪ-ɲe nʲinʲi-ø ɲa-nʲi-winʲikapak-nu
 1sg-ERG 2sg-ABS 1sg I-2sg-accompany-FUT
 "I will accompany you"

- (249) ɲayɪɛ nʲinʲi ɲanʲiwinʲikakpaknu
 "I will accompany you continuously"

It is only by looking at a number of other examples of the same process that it becomes clear what has happened in (249):

- (250) ḡayɪ ḡa-win^yimaḡapak-nu
 lsg lsg I-pour fluid into container-FUT
 "I will pour fluid into a container"

- (251) ḡayɪ ḡawɪnʷimaɖal palnu
 "I will pour fluid into many containers"

- (252) ḡayi ḡa-nadum-nu
 lsg lsg I-fasten two things together (with one
 instrument)-FUT
 "I will fasten two things together (with one instrument)"

- (253) ḡayī ḡananumnu
 "I will fasten many things together; I will fasten
 many pairs of things together with many instruments
 (eg. bolts)."

However this is only an attempt towards one of the many forms of partial reduplication. Other processes are at work just in these two verbs:

(254) ḡayī ḡa-na-wilad-nu nukunu-nu
lsg lsg I-3sg MASC BEN-give much-FUT 3sg MASC-DAT
"I will give much to him"

(255) ḡayī ḡanawiladadnu nukununu
"I will give much to him many times"

(256) ḡayī ḡa-lidud-nu ḡara paḡu
lsg lsg I-light fire-FUT LOC grass
"I will light fire in the grass"

(257) ḡayī ḡarududnunaḡāni ḡara paḡu
"I will light many fires in the grass"

- (254) ḡayi ḡa-na-wilad-nu nukunu-nu
 lsg lsg I-3sg MASC BEN-give much-FUT 3sg MASC-DAT
 "I will give much to him"
- (255) ḡayi ḡanawiladadnu nukununu
 "I will give much to him many times"
- (256) ḡayi ḡa-lidud-nu ḡaja paṇu
 lsg lsg I-light fire-FUT LOC grass
 "I will light fire in the grass"
- (257) ḡayi ḡalududnunaṇi ḡaja paṇu
 "I will light many fires in the grass"

Practically every verb root has a reduplicated form (in the sense used here) but there is just not sufficient checked data to give an overall account of this phenomenon.

4.2.12 Co-occurrence Restrictions between any verb root and the Auxiliaries.

One of the most intriguing questions that arises from the discussion is whether there is a principled motivation for which auxiliaries a given verb root selects. What is required is an account of a large number of verb roots (the present corpus for Muɿinypata runs to around a thousand) and their selectional possibilities with a representative sample of native speakers.

This sort of task was undertaken in part by Birk [1974:188ff] with a sample, however, of only 350 verb roots and a couple of native speakers. It may be that this is another task which is really beyond the non-native speaker linguist: it is certainly beyond the scope of this study. What has been done so far is not conclusive nor sufficiently broadly based.

4.3 Particles.

Particles form a word-class [3.7] the members of which cover the functions of "so-called" prepositions and conjunctions in English. The particles of Muɿinypata provide logical (eg. "and", "or") and modal (eg. possibility, conditionals) qualifications to a sentence. They also yield locational information on nominals and verbs, for instance, the location of the referent

of some nominal or the direction of the action described by some verb.

4.3.1 yi

yi indicates conjunction either of nominals or verbs.

When yi is used it must appear between each pair of conjuncts:

- (258) kaḍu kunugunu yi ku wanangal yi kaḍu
 NC:person old woman and NC:meat doctor and NC:person
 kumbaja pumbanka-ŋime
 first 3pc MOVE PERF-pc FEM
 "An old woman, a (white) doctor and a chief came"

- (259) ŋayi-ka kuja ti bam-kuduk yi
 1sg-TOPIC NC:water tea 1sg X PERF-drink and
 nigunu-wa mi-dampa ḍim-murk
 3sg FEM-EMPH NC:food-damper 3sg SIT PERF-eat
 "I drank some tea and she ate some damper"

These sentences can also be expressed by deleting each instance of yi so that (258) becomes:

- (260) kaḍu kunugunu ku wanangal kaḍu kumbaja pumbankaŋime

Although yi must appear between each pair of conjuncts it is permissible to interpolate words other than conjuncts eg. a verb into such a construction:

- (b) appearing after each nominal indicating
alternative possibilities; a less positive a.

(263) nukunu- ϕ kamayya puju-nu tyipinyi_{je}
3sg MASC-ABS perhaps 3sg MOVE-FUT tomorrow
"Perhaps he will come tomorrow"*

(264) tangu n'yinyi-ka tam- η ka ϕ yuwu
what 2sg-TOPIC 2sg X PERF-see INTERROG
"What did you see?"
 η ayi η am-yekum ku munduwiguwi kamayya
1sg 1sg I PERF-forget NC:meat bustard perhaps
ku kulerkurk kamayya ku kan η andan kamayya
NC:meat brolga perhaps NC:meat emu perhaps
"I forget; maybe [it was] a bustard, maybe a
brolga, maybe an emu"

Dixon [1972:363-4] draws attention to two types of disjunction:

closed - the stated alternatives are claimed to
exhaust all the possibilities.

open - likely alternatives are stated but there
may be other alternatives.

I suspect (but it requires checking) that a indicates closed
disjunction while /kamayya/ represents open disjunction.
Interestingly it is suspected that a is a loan from English,
"or", which represents only closed disjunction.

*This expression is more positive than an expression using a
subjunctive form: nukunu kuju nukun tyipinyi_{je}

"He might come tomorrow"

4.3.4 maḍa

This indicates negation for verbs [4.2.4]. For verbs with future reference the particle, nukun [4.3.6], is also used; otherwise maḍa alone with systematic changes in the auxiliary forms.

4.3.5 mananga

This particle indicates negation for nominals [4.1.5].

- (265) kan^{vi}-ka mananga nindu
 this (near)-TOPIC NEG horse
 "This is not a horse!"

- (266) nindu paṅu-ka mananga ṅala
 horse that (remote)-TOPIC NEG big
 "That horse is not big"

It appears that mananga is being generalised in its function by younger speakers to become a verbal negator as well.

4.3.6 nukun

This particle, labelled IRREALIS, appears in future negative and subjunctive expressions [4.2.3.2], [4.2.4].

4.3.7 ṅata "if" signals conditionals (eg. (201)). This particle tends to appear at the end of the protasis but need not. Typically the subjunctive form of the verb is used in conditionals although it may be difficult to establish whether a form is subjunctive when the subjunctive particle, nukun, has been deleted.

- (267) nukunu-je kaḍu ḡatan ḡayi ku-ḡ-baḍ
 3sg MASC-ERG NC:person brother 1sg 3sg VIII SUBJ-3sg-strike
 ḡata ḡayi-ka nukunu-wa ḡu-ḡ-baḍ
 if 1sg-TOPIC 3sg MASC-EMPH 1sg VIII-3sg-strike
 "If he were to hit my brother, I would hit him"

4.3.8 yiḍa "because"

This particle tends to appear at the end of a causal clause although it need not. Analogous to (267) is:

- (268) nukunu-je kaḍu ḡatan ḡayi panmaḍ yiḍa ḡayika nukunuwa
 ḡubaḍnu
 "Because he hit my brother, I will hit him"

4.3.9 ḡiyiḍa "in turn, again"

ḡiyiḍa indicates that the action it qualifies is reciprocating an earlier action. Thus (268) can become:

- (269) nukunu-je kaḍu ḡatan ḡayi panmaḍ yiḍi ḡayika
 nukunuwa ḡubaḍnu ḡiyiḍa
 "Because he hit my brother, I, in turn, will hit him"

Otherwise, ḡiyiḍa indicates that an action is happening another time:

- (270) ḡayika ḡuḡunu ḡiyiḍa
 "I will come again"

4.3.10 waḍa

waḍa has a number of quite different functions:

- (a) the actor tried to carry out some action but did not fully complete it. Generally used with imperfect tense forms:

(271) *ḡayi-ka tamul waḡa me-wata-da*
 1sg-TOPIC spear nearly 1sg XIII-make-IMPERF
 "I nearly made a spear"

- (b) the action happened just at the time of reporting it: "just now"; "right now". Generally used with perfect tense forms.

(272) *nukunu-ḡ waḡa ḡim-bebe^{*}*
 3sg MASC-ABS now 3sg SIT PERF-vomit

- (c) the action is just on the point of happening: "soon". Generally used with future tense forms.

(273) *piḡuna-ḡ waḡa pa-nu*
 3du SIB-ABS "soon" 3du SIB MOVE-FUT
 "They two siblings are just about to go"

- (d) sometimes the particle has an inchoative force, "become". Generally occurs in non-verbal sentences.

(274) *ku ḡen waḡa wunmuk*
 NC:meat meat INCHOATIVE rotten
 "The meat has gone rotten"

*This form becomes *ḡimebe* by MP-7 and MP-11 [2.1.10.17].

The inchoative sense applies for future and non-future actions:

- (275) tʷipinʷiɕe ku ɲen wəɖa wunmuk
 tomorrow NC:meat meat INCHOATIVE rotten
 "Tomorrow the meat will be rotten"

4.3.11 mani

mani indicates possibility; whether the actor is able to perform such action.

- (276) nanʷdʷi ta-windut-nu mani palʷir kanʷi yuwu
 NC:thing 2sg I-lift-FUT be able rock this INTERROG
 "Can you lift this rock?"

With an imperative, mani has a conative force: "try (to do it)"

- (277) ta-ø-wal-nu mani
 2sg I-3sg-spear-FUT try
 "Try to spear him!"

4.3.12 yuwu

yuwu most often indicates a question eg. (276) but is also may appear in the apodosis of conditionals, its function there being obscure unless it is to be taken in conjunction with ɲata "if" [4.3.7] in the protasis, confirming the consequence stated in the apodosis: ? "indeed"

- (278) nukunu-ka wuui-da nata
 3sg MASC-TOPIC 3sg MOVE-NON FUT SUBJ if
 nayi-wa nuui-da yuwu
 1sg-EMPH 1sg MOVE-NON FUT SUBJ indeed
 "If he had come I would have gone"

4.3.13 ninipun^y

This particle preceding a noun indicates that that noun is similar to or like the subject noun phrase of the sentence. Attempts to use this particle with nouns other than the subject have been unsuccessful: the result has always been a separate sentence in which ninipun^y applies to a subject noun which had been a non-subject before:

- (279) n^yin^yi ninipun^y nayi nam
 2sg like 1sg 2sg SAY/DO PERF
 "You talk like me"

Interestingly, ninipun^y means "body, appearance" in other contexts exactly parallel to English "like" <OE lic "body".

4.3.14 katu

Generally this particle has an allative sense.

- (280) tuju-nu katu^{*}
 2sg MOVE-FUT towards
 "Come here!"

* In rapid speech, the initial segment of katu may be lenited to w.

- (281) *ɲayl-ka ɲuʒan dawun katu*
 1sg-TOPIC 1sg MOVE PERF Darwin towards
 "I went to Darwin"

4.3.15 *waŋu* "away"

- (282) *tuʒu-nu waŋu*
 2sg MOVE-FUT away
 "Go away!"

- (283) *ɲayika ɲuʒan dawun waŋu*
 "I came from Darwin"

4.3.16 *ɲaʒa*

This particle has a wide range of possibilities for expressing locational and directional information. Some of its glosses are "in", "on", "towards", "away from", "up", "down", "into", "outside", "near", "on top of", "below", "at" etc. It might be thought that so many different functions would result in ambiguity. However context normally makes it clear what is meant; when it does not further specification is given. For instance, (281) could alternatively be expressed as:

- (284) *ɲayika ɲuʒan ɲaʒa dawun*
 "I went to Darwin"

However (284) could also express (283). To disambiguate these two readings, *ɲaʒa* can be used with *katu* or *waŋu* although either of those particles by itself makes clear what is meant. *ɲaʒa* precedes the noun and *katu* or *waŋu* follow it.

(285) ḡayika ḡujan ḡaja dawun katu

"I went to Darwin"

(286) ḡayika ḡujan ḡaja dawun waju

"I came from Darwin"

Sometimes the meaning of the verb makes clear how ḡaja is to be interpreted in a sentence:

(287) ḡayi-ka ḡani-|a-nu ḡaja tayi

1sg-TOPIC 1sg HAB-climb-FUT up tree

"I will climb up a tree"

(288) nanʔdyi kum ḡim ḡaja teybul

NC:thing bottle 3sg SIT PERF on table

"The bottle is (sitting) on the table"

The preferred reading for ḡaja in (288) would normally be "on" but additional particles can be used if it is necessary; for instance, if it was not clear from a context whether ḡaja was to be interpreted as "on", "above" or "below", two additional particles can be used either alone or in conjunction with the "all-purpose" ḡaja, which will be glossed as LOC.

4.3.17 kangal

kangal "above", "on top of"

(289) nanʔdyi kum ḡim (ḡaja) teybul kangal

"The bottle is on top of the table"

4.3.18 pepe

pepe "below", "under"

(290) nanYdYi kum dīm (ŋaJa) teybul pepe

"The bottle is underneath the table"

4.4 Interrogative Words

Questions are marked by the interrogative particle, yuwu, [4.3.12], by a characteristic interrogative intonation [2.2.2.6] and by question words.

4.4.1 ŋaJa

Like the particle, ŋaJa [4.3.16], this question word indicates location ie. "where".

(291) ŋaJa nYinYi-Je nukunu-ø tam-ø-ŋkaɖu
 where 2sg-ABS 3sg MASC-ABS 2sg X PERF-3sg-see
 "Where did you see him?"

ŋaJa in its locational sense behaves like a nominal appearing with directional particles [4.3.14-15] eg.

(292) ŋaJa waŋu tuJan
 where away (from) 2sg MOVE PERF
 "Where did you come from?"

In addition, ŋaJa indicates "what"

(293) ŋaJa tamkaɖu*
 "What did you see?"

*Illicit three member cluster *mŋk is reduced to mk.

In this sense, *ɲaɲa* behaves as a nominal appearing with ergative-instrumental inflections:

- (294) *ɲaɲa-ɲe tuɲu-nu ɲaɲa dawun*
 what-INSTRUM 2sg MOVE-FUT LOC Darwin
 "How (with what) will you go to Darwin?"

ɲaɲa, curiously, cannot be used with *nu* although *taŋku* [4.4.2] can.

ɲaɲa is used with a word, *wiɖiki* "size" to make inquiries about physical dimensions.

- (295) *ɲaɲa wiɖiki kuɲa peweti yuwu*
 what size water deep INTERROG
 "How deep is the water?"

- (296) *ɲaɲa wiɖiki ɲipilinʸ panguyyi*
 what size creek long
 "How long is the creek"

- (297) *ɲaɲa wiɖiki dawun yuwu*
 what size Darwin INTERROG
 "How far is it to Darwin?"
 OR "How big is Darwin?"

The ambiguity of (297) causes no more confusion when it is put in context than does an English (also elliptical) expression like "How long?": which may be inquiring about a physical dimension or a lapse of time. Of course if it

is necessary to disambiguate (297) one can say:

- (298) ɲaɲa wiɖiki dawun katu yuwu
 "How far is it to Darwin?"

A little used variant of ɲaɲa is ɲaɲɔ.

4.4.2 taŋku

taŋku also means "what:" and behaves like a nominal taking the full range of nominal inflections:

- (299) taŋku damkaɬu
 "What did you see?"

- (300) maɭuk taŋku-ɭe nam-wata yuwu
 didjeridu what-INSTRUM 2sg XIII PERF-make INTERROG
 "What did you make the didjeridu with; how did you make the didjeridu?"

- (301) taŋku-nu tʲim-kark
 what-DAT 2sg SIT PERF-cry
 "Why are you crying?"

- (302) taŋku-nu pan-ŋi-baɖ
 what-DAT 3sg VIII PERF-1sg-strike
 "Why did he hit me?"

taŋku in the meaning above appears to be interchangeable with ɲaɲa however taŋku never means "where".

taŋku is used in conjunction with numa to indicate

"how much", "how many" (non-human reference only).

- (303) taŋku numa¹ ku walundak tam-ŋkaɖu
 what number NC:meat pelican 2sg X PERF-see
 "How many pelicans did you see?"

- (304) taŋku numa nanYdYi daɟimun tanYdYin yuwu
 what quantity NC:thing sand 2sg HAVE PERF INTERROG
 "How much sugar ("sand") do you have?"

4.4.3 naŋkal

This question word applies to nouns with human reference (including spirits). It behaves like a nominal in that it takes the full range of nominal inflections.

- (305) naŋkal-ø nukunu-je pan-ø-baɖ
 who-ABS 3sg MASC-ERG 3sg VIII PERF-3sg-strike
 "Whom did he hit?"

- (306) naŋkal-te ŋayi-ø pan-ŋi-baɖ
 who-ERG 1sg-ABS 3sg VIII PERF-1sg-strike
 "Who hit me?"

- (307) naŋkal-nu nYinYi-je lawanga-ø tam-wa² yuwu
 who-DAT 2sg-ERG wallaby-ABS 2sg I PERF-spear INTERROG
 "For whom did you spear the wallaby?"

¹Any similarity between numa and "number" is purely coincidental.

²By MP-1 this form becomes tampaɭ. Once again it is difficult to know exactly what the morphemic structure of this verb form is. If lawanga were cross-referenced into the verb as a bound pronoun it would appear as ø. Native speakers are divided on accepting overt pronominal forms in the verb which cross-reference nouns with non-human but animate reference.

naŋkalnu is not cross-referenced into the verb form as a bound pronominal (benefactive) form, for instance:

(308) *naŋkalnu nʸinʸiɛ lawaŋga tamnawal yuwu

in which na would cross-reference naŋkalnu. Native speakers sensibly point out that there's no need to ask a question about someone if you know who he is! This claim arises from the fact that any of the bound pronoun forms give information about the number, sex or status of the noun phrases they cross-reference. In fact it is quite reasonable to ask a question about a person's identity even if you know that there is only one and that he is male. The native speakers' comment is thus only partly right but indicates the reluctance to give specific information that one truly does not know about some individual or group. When some information is known the question may be expressed in this form:

(309) peneme-ka naŋkal-te pumban ka -nʸi-baɔ-neme
 3pc MASC-TOPIC who-ERG 3pc VIII PERF-2sg-strike-3pc MASC
 "Which few non-sibling males hit you?"

In addition, naŋkal may be included as part of a known group:

(310) naŋkal-ø ŋuɔu-nu-ninda yuwu
 who-ABS 1du exc MOVE-FUT-du MASC INTERROG
 "Who (other than the addressee) will come with me?"

Presupposed in (310) is that the speaker and the person to accompany the speaker are male and non-sibling.

4.4.4 minYdYiJe

minYdYiJe (which has a little-used variant minYdYidiYideJe)
indicates "when", or, for continuous action "how long".

- (311) minYdYiJe nukunu pajuwi-nu
when 3sg MASC 3sg arrive-FUT
"When will he arrive?"

- (312) minYdYiJe nukunuJe nYinYi pannYibaḡ
"When did he hit you?"

- (313) minYdYiJe nukunu-Je nYinYi-ḡ
how long 3sg MASC-ERG 2sg-ABS
puni-nYi-tuk*-da-ḡini
3sg VIII-2sg-hit often-IMPERF-3sg SIT
"How long was he hitting you for?"

- (314) minYdYiJe tanYdYin yiḡiḡur
when 2sg HAVE PERF pain
"When did you have pain?"

- (315) minYdYiJe tanYdYi-da yiḡiḡur
how long 2sg HAVE-IMPERF pain
"How long have you been having pain?"

- (316) minYdYiJe tanYdYi-da-tYini yiḡiḡur
when 2sg HAVE-IMPERF-2sg BECOME pain
"When did you start having pain?"

*The verb baḡ does not have an imperfect paradigm, the gap being filled by another verb, tuk "hit often".

4.4.5 nan

nan has its closest equivalent in English "what's its name?", "what do you call it?". It is used when one cannot remember the specific term for some item. It immediately follows a noun-classifier since it is unlikely that one cannot remember the noun class in which an object should appear.

- (317) tangu paŋu paŋu-ka ku nan
 what that that-TOPIC NC:meat what do you call it
 "What's that?" "That's what's its name?"
 ma yukuwi ku maminmaga
 oh yes indeed NC:meat black cormorant
 "Oh, yes; it's a Black Cormorant".

4.5 Universal Affixes

There are four affixes that can occur with almost any type of word.

4.5.1 -ka

This suffix is difficult to give a precise English gloss. It is somewhat like a topicalizer* but may contribute to the interrogative force of a sentence (cf. the homophonous interjection [3.5]).

- (318) ŋayl-ka nʏinʏi ŋu-nʏi-baɖ-nu
 1sg-TOPIC 2sg 1sg VIII-2sg-strike-FUT
 "It is I who will hit you"

*Abbreviated as TOPIC.

is contrasted with

- (319) *ɲayi nʲinʲi-ka ɲu-nʲi-baɖ-nu*
 1sg 2sg-TOPIC 1sg VIII-2sg-strike-FUT
 "It is you (not someone else) who will be hit by me"

These English translations are rather stronger than Mujinypata in the emphasis they place on the affixed words.

4.5.2 -wa

This affix is likewise difficult to gloss but is a stronger form of -ka. It draws attention to the word to which it is suffixed but adds more emphasis. The abbreviation EMPH will be used for this affix.

Corresponding to (318) and (319) we have expressions for which it is difficult not to give a stilted translation:

- (320) *ɲayi-wa nʲinʲi ɲu-nʲi-baɖ-nu*
 1sg-EMPH 2sg 1sg VIII-2sg-strike-FUT
 "I am indeed the one who will hit you"

- (321) *ɲayi nʲinʲi-wa ɲu-nʲi-baɖ-nu*
 1sg 2sg-EMPH 1sg VIII-2sg-strike-FUT
 "It is indeed *you* whom I will hit"

-ka and -wa may also appear with verbs (and other parts of speech) drawing attention to parts of the sentences other than nouns:

(322) *ɲayi nʲinʲi ɲu-nʲi-baɖ-nu-wa*

1sg 2sg 1sg VIII-2sg-strike-FUT-EMPH

"I will indeed *hit* you; *hitting* is what I will do to you"

4.5.3 -ya

-ya indicates some doubt about the word to which it is suffixed. Some qualification is made by the speaker so that it has an opposite effect to -wa. It might be covered by English "perhaps". -ya has some interrogative force in that the speaker is asking, to an extent, his auditors "Is that right?". It indicates that the speaker is dubious*.

(323) *ɲayi kumbit-ya pan-ø-baɖ*

1sg kangaroo-DUB 1sg VIII PERF-3sg-strike

"I hit a kangaroo, I think (or was it a wallaby?)"

(324) *paɲun putput-ya*

woman pregnant-DUB

"The woman is pregnant, perhaps?"

This affix may occur attached to a word with -ka (but not -wa). A small child, feeling neglected, spontaneously was heard to say:

(325) *ɲayi-ka-ya*

1sg-TOPIC-DUB

"(Hey), what about me?"

*The suffix is glossed as DUB.

4.5.4 -te/-je

This affix, homophonous with the ergative/instrumental inflection [4.1.2], has temporal reference. It is roughly translatable as "when". The suffix may be attached to any word in a clause although it appears most often to be attached to the verb (if there is one).

- (326) palgun wuɟini-da-je ɲayi-je nɲinɲi-ø
 woman 3sg move-IMPERF-TEMP 1sg-ERG 2sg-ABS
 pan-nɲi-baɖ
 1sg VIII PERF-2sg-strike
 "When the woman came, I hit you"

In fact the suffix draws attention to the time at which the action of the first clause took place in a more pointed way than is expressed by the translation given above. It would be better glossed as: "It was when the woman came that I hit you" or "Do you recall the time when the woman came and I hit you?". Although the latter translation is in question form it should be interpreted as a so-called "rhetorical question" not as having any true interrogative force.

This suffix may be attached to a word in a single clause:

- (327) ɲayi-ka-je kumbaja ɲuɟini-da ɲaja waɖeya
 1sg-TOPIC-TEMP first 1sg move-IMPERF LOC Waɖeya
 "Do you remember the first time I came to Waɖeya
 (place name)?"
 "It was on the first occasion I came to Waɖeya".

There is a constraint on the occurrence of the temporal suffix and the ergative/instrumental inflection on the one word. Only one of these suffixes may occur on the one word (which must, of course, be a nominal). In fact, it is very unlikely for a situation to arise where the two suffixes would be expected to mark the one word. This is because the ergative/instrumental inflection is sparingly used [5.5] and because the temporal suffix can as well be attached to some other word in the sentence. When there is a possible clash of functions there is no way of telling which function is being represented by the "remaining" suffix:

- (328) $\eta a y i - j e$ $n y i n y i - \emptyset$ $p a n - n y i - b a \dot{q}$
 1sg-TEMP~ERG 2sg-ABS 1sg VIII PERF-2sg-strike
 "I hit you" or "Do you remember the time I hit you?"

Two occurrences of the suffix, -te ~ -je, can not appear on $\eta a y i$:

- (329) $*\eta a y i j e j e$ $n y i n y i$ $p a n n y i b a \dot{q}$

There is no restriction on two occurrences of -te ~ je (with different functions) in the one clause, so that

- (330) $\eta a y i j e$ $n y i n y i j e$ $p a n n y i b a \dot{q}$
 or (331) $\eta a y i j e$ $n y i n y i$ $p a n n y i b a \dot{q} j e *$

*By MP-5, $p a n n y i b a \dot{q} t e$

can be unambiguously interpreted; the first instance of -Je in each case denotes ERG and the second instance, TEMP. In (327) -Je is unambiguously interpreted as TEMP since *ḡayi* cannot function as a transitive subject (nor any word in that sentence) and thus appear with an ergative case marking.

4.6 Ordering of Affixes in Nominals

Four types of roots must be distinguished amongst nominals for the purpose of describing the ordering of affixes:

- (a) pronominal roots [4.1.1]
- (b) adjective roots which incorporate pronouns and/or body part nouns
- (c) noun roots which incorporate body part nouns [4.1.4.1]
- (d) other nominal roots. This category includes some adjectives and all nouns except those in (c) and all noun-classifiers.

The pattern for (a) is:

$$\text{Pronominal Root} + \text{NI} \left\{ \begin{array}{l} + \text{Case Inflection} + \left\{ \begin{array}{l} \text{ka (ya)} \\ \text{wa} \\ \text{ya} \end{array} \right\} \\ + \left\{ \begin{array}{l} \text{ka (ya)} \\ \text{wa} \\ \text{ya} \end{array} \right\} + \text{Case Inflection} \end{array} \right\}$$

for example,

(332) *nanku-ninda-wa-Je*

2 du pc - du MASC - EMPH - ERG

"You two (at least one male) ERG!"

The other patterns are:

- (b) Adjective Root + Direct Object Pronoun (+ Body Part) + NI.
- (c) Noun Root + Direct Object Pronoun + Body Part + NI.
- (d) Other Nominal Roots.

to any of which may be added:

$$\left\{ \begin{array}{l} \text{Case Inflection} \\ \left\{ \begin{array}{l} \text{ka (ya)} \\ \text{wa} \\ \text{ya} \end{array} \right\} \\ + \text{Case Inflection} \end{array} \right\} + \left\{ \begin{array}{l} \text{ka (ya)} \\ \text{wa} \\ \text{ya} \end{array} \right\}$$

For example,

- (333) pata-nanku-ŋinda-je-ka
 good-2du/pc-du MASC-ERG-TOPIC
 "You two good females ERG"

- (334) paŋki-wunku-be-ninda-nū-ka
 long-3du/pc-arm-du MASC-DAT-TOPIC
 "On behalf of them two long-armed males"

- (335) ɲeɬ-ŋanku-je-neme-wa-nu
 boil-1du/pc exc-buttocks-pc MASC-EMPH-DAT
 "For us few at least one of whom is male and not
 including the addressee with boils on our buttocks"

- (336) palnūn-ya-je ŋayi-∅ pan-ŋi-baɖ
 woman-DUB-ERG 1sg-ABS 3sg VIII PERF-1sg-strike
 "It was a woman, I think, who hit me"

Remaining to be accounted for is the suffix with temporal reference, -je ~ te [4.6.4]. It is difficult to say exactly what the restrictions are on this affix. It appears to always occur finally except when the nominal root has the potential to appear with an ergative/instrumental suffix. What is truly an ergative/instrumental suffix is very often deleted because the pronominal cross-referencing system [4.2.1] would unambiguously signal the syntactic function of the nominal. Thus the ergative suffix is redundant in:

- (337) kaɖu kigayyi-je ŋayi-∅ pan-ŋi-baɖ
 NC:person youth-ERG 1sg-ABS 3sg VIII PERF-1sg-strike
 "The youth hit me"

and, being redundant, may be deleted:

- (338) kaɖu kigayyi ŋayi panŋibaɖ
 "The youth hit me"

If the translation given by native speakers for a sentence indicates that the temporal suffix should be used, then it is not possible to say what the suffix represents if it has been attached to the ergative (or instrumental) noun phrase:

- (339) kaḍu kigayyi-je ṇayi-ø pan-ṇi-baḍ
 NC:person youth-? 1sg-ABS 3sg VIII PERF-1sg-strike
 "When he was a youth he hit me"

It may be that the ergative suffix, -je, was deleted so that the je in (339) would be interpreted as the temporal suffix.

Alternatively it may be that because of the constraint on two occurrences of -je/~te on one word [4.6.4] it is not decidable whether what "remains" (after one of the suffixes has been deleted) is ergative or temporal.

It should be pointed out that Muḷinypata words seldom have more than one suffix. Outside elicitation sessions it is unusual to observe more than two suffixes on one word. Native speakers grudgingly accept that one can say (334) but would probably themselves use expressions like:

- (340) pe-ninda-nu kaḍu-ka kanʔdʔin-ninda
 3du pc-du MASC-BEN NC:person-TOPIC 3 have-du MASC
 nitʔi panguyyi
 arm long
 "on behalf of them two males; the ones who have long arms"

Dixon [1972:233] provides a cautionary note on glib statements of relative orderings which are probably better handled by a native speaker, trained as a linguist.

Keeping this qualification in mind, a few summary statements will be made. Cross-referencing bound pronouns occur immediately after a root. Body part terms immediately follow the bound pronoun form and immediately precede the number indicator (NI). Note that in verbs [4.2.12] the direct object pronoun must occur immediately before the body part term while the body part term immediately precedes the verb root; the number indicator immediately follows the verb root. The relative order of these three affixes: direct object pronoun, body part term and number indicator, thus remains the same in the verb but the verb root is interpolated between the body part term and the number indicator. The temporal suffix, -je ~ -te, often occurs finally. The other universal affixes [4.5.4] may occur either before or after the case inflections, the resulting combination normally ending the word.

5. Syntax

In Mujinykata, syntactic relations are marked in three ways:

- a) case inflections on nominals [4.1.2].
- b) cross-referencing bound pronouns prefixed to verb roots [4.2]
- c) word order [5.4]

Any combination of these three processes may occur in a particular sentence but in every-day discourse only one or two will be at work, most often (a) being dispensed with, (b) being obligatory [5.5].

Case inflection on nominals follows an ergative-absolutive pattern:

(341) $\eta\text{ayi-je}$ $n\text{yin}\text{yi-}\phi$ $\text{pam-n}\text{yi-}\eta\text{ka}\phi$
 1sg-ERG 2sg-ABS 1sg X PERF-2sg-see
 "I saw you"

(342) $\eta\text{ayi-}\phi$ $\text{pam-}\eta\text{ka}\phi$
 1sg-ABS 1sg X PERF-see
 "I was looking around"

Note also that cross-referencing bound pronouns follow a nominative-accusative pattern.

(341) and (342) illustrate cross-referencing bound pronouns. Such pronouns in the sentences above redundantly specify the case relations which have already been established by the case inflections on the nominals. Similarly,

(343) nʏinʏi-je ɲayɪ-ø tam-ɲi-ɲkaɖu
 2sg-ERG 1sg-ABS 2sg X PERF-1sg-see
 "You saw me"

(344) nʏinʏi-ø tam-ɲkaɖu
 2sg-ABS 2sg X PERF-see
 "You were looking around"

show specification of syntactic relation in three ways: nominal inflections, cross-referencing bound pronouns and word order [5.4].

The basic medium of syntax is the sentence. Before turning to different types of sentence a brief discussion follows on what a sentence is.

5.1 Discussion of "Sentence".

Although the term, "sentence", is frequently used by grammarians there has been little effort expended in stating clearly what the term refers to. For the most part, modern grammarians have turned a blind eye to this difficult problem. Perhaps this is because so little is known about structures larger than the sentence that it is almost impossible to define "sentence" by syntactic criteria: morphological criteria are hardly applicable (at least for English and Mujinypata) while semantic criteria are dogged by vagueness and a prevalent lack of verifiability. On the other hand, traditional grammarians have tackled the problem but not with a great deal of success, as one of the greatest points out:

'The definitions of "sentence" are too numerous and too divergent for it to be worth while here to reprint or criticize them all. In so far as they are not merely bogus definitions, in which technical words are used to conceal the want of clear thought, these definitions have taken as their starting point either formal or logical or psychological considerations, while some of them have tried to reconcile two or three of these points of view' [Jespersen, 1924:305].

The notion which seems best to characterise "sentence" is "independence" : this is exemplified in the following definitions:

'A sentence is a (relatively) complete and independent human utterance - the completeness and independence being shown by its standing alone or its capability of standing alone ie. of being uttered by itself' [Jespersen, 1924:307]

'According to Bloomfield a sentence is "an independent linguistic form, not included by virtue of any grammatical construction in any larger linguistic form" ' (quoted in [Lyons, 1968: 172]).

These definitions will be adopted in this study, not because they are invulnerable to criticism but rather so that at least part of what is meant by the term " sentence" is made explicit.

In Muɲinypata discourse, sentence boundaries are marked by pauses and by the interjection, *beje* [3.5].

5.2 The Simple Sentence.

Simple sentences are of two types in Muɲinypata: transitive and intransitive. As shown in (341) and (342) a nominal functioning as a transitive subject receives an ergative inflection while a nominal functioning either as a transitive object or an intransitive subject receive an absolutive (unmarked) inflection.

On the other hand pronominal cross-reference employs a nominative-accusative construction. Thus a nominal which functions as a transitive object receives pronominal cross-referencing in the form of bound direct object pronouns in the verb [4.2.1.2.A] while nominals functioning as a transitive or intransitive subject receives pronominal cross-referencing in the form of Auxiliary bases [4.2].

Most Australian languages follow an absolutive-ergative pattern for nouns but a nominative-accusative pattern for pronouns. Muɲinypata differs from this scheme in having pronouns inflecting on an absolutive-ergative pattern as does Walbiri [Hale, 1970:776-9].

Sentences with "middle" verbs [4.2.7] follow the usual pattern marking the nominal functioning as (intransitive) subject with the absolutive inflection.

Modification of a simple sentence has already been treated in other sections: negation [4.2.4], [4.3], subjunctive mood [4.2.3.2], questions [4.4].

5.3 Non-verbal Sentences.

Apart from the transitive and intransitive sentence types [5.2], sentences which do not contain a verb are common in Muɲinypata.

Sentences of this type often require the English verbs "be" or "have" in their translation.

(345) paŋu-ka lawaŋga
 that (remote)-TOPIC wallaby
 "That's a wallaby"

(346) nukunu-ka kaɖu batʲu
 3sg MASC-TOPIC NC:person foreign
 "He's a foreigner"

(347) kanʲi-ka nanʲdʲi meditʲin luruwity ɲala
 this-TOPIC NC:thing medicine muscle big
 "This is strong medicine"

(348) ɲayɪ-ø nanʲdʲi maɭuk
 1sg-ABS NC:thing didjeridu
 "I have a didjeridu"

- (349) *ṇayi-ka* *lirwi ṇaja tarmu*
 1sg-TOPIC sure LOC (lower) leg
 "I have a sore on my (lower) leg"
- (350) *palṇun kan^yi-ka* *putput*
 woman this-TOPIC pregnant
 "This woman is pregnant"
- (351) *pule paṇu-ka* *kananaja waṇu*
 old man that-TOPIC Kununurra away from
 "That old man is from Kununurra"
- (352) *kaḍu* *lepata nan^yd^yi deṇet waḍa*
 NC:person busy NC:thing mob INCHOATIVE
 "The busy man became rich"
- (353) *nukunu-ka* *ṇaja ḍa wiḷit*
 3sg MASC-TOPIC LOC place bed
 "He's on the bed"

Non-verbal sentences of this type have a head noun with an equational predicate eg. (345-7), (350), or with a locative phrase (351), (353); otherwise the sentence falls into a head noun and some sort of possessive phrase (possession is discussed below [5.6]) (348-9) (352).

Sentences without verbs also appear as a result of ellipsis in discourse. Such reduced sentences also occur in English. In *Mujinypata*, non-verbal sentences of this type may be responses to questions:

(305) nan̩kal nukunu̩je panmaɖ

"Whom did he hit?"

(354) kaɖu panguyyi panguyyi

NC:person long long

"The very tall man"

comments on the discourse:

(355) ma kaɖu panguyyi panguyyi

"Oh! The tall man"

or simply ejaculations:

(356) yakay ku tiwungu

hey NC:meat wedge-tailed eagle

"Hey! (It's) a wedge-tailed eagle!"

Expressions involving body part-incorporation or the comitative [4.1.4.1] may form a whole sentence without a verb:

(357) mananga pemaɾ-ŋl-we-ø

NEG head hair-lsg-head-ABS

"I'm bald"

5.4 Word Order

Word order is quite free in Muɣinypata. There are just two restrictions on word order:

- (a) Adjective/Adverb Qualifiers must immediately follow the word they qualify [3.2.2].

- (b) the negative particle, *maḍa* [4.3.4], must immediately precede the verb it negates; the negative particle, *manan̄ga* [4.3.5], must immediately precede the nominal it negates.

Otherwise there are word ordering preferences. These preferences tend to be invoked when ambiguity would otherwise result [5.5] but any or all of the preferred orderings may be ignored in a given sentence. Word ordering preferences include:

- (i) Absolute NPs precede the verb.
- (ii) Ergative NPs precede absolute NPs.
- (iii) Dative NPs follow the verb.
- (iv) Instrumental NPs follow dative NPs.
- (v) Locative expressions follow instrumental NPs.
- (vi) Adjectives (and demonstratives) follow the nouns they qualify.
- (vii) Adverbs follow the verb they modify.
- (viii) A relative clause [5.9] follows its antecedent.
- (ix) Subordinate clauses (other than relative clauses) precede the main clause.
- (x) A possessive phrase follows the NP it qualifies.
- (xi) Interrogative words (excluding *nan*) are sentence-initial.

Examples given so far have generally followed the norm word order.

5.5 Admissible deletion and Possible Ambiguity

It has already been observed that there is considerable

redundancy in the marking of syntactic relations in a sentence [5]. Consider:

- (358) *ɲayi-je nukunu-∅ ɲu-mba-baɖ-nu*
 1sg-ERG 3sg MASC-ABS 1sg VIII-2sg BEN-strike-FUT
nʲinʲi-nu tʲu tayi-je
 2sg-DAT NC:weapon tree-INSTRUM
 "I will hit him for you with a stick"

Since the ergative and dative NP's are cross-referenced into the verb the case inflections on those nominals can be (and usually are) deleted:

- (359) *ɲayi nukunu ɲumbabaɖnu nʲinʲi tʲu tayiɛ*

Since information on person and number for those two NP's has also been cross-referenced the free-standing pronouns can be deleted:

- (360) *nukunu ɲumbabaɖnu tʲu tayiɛ*

Because indirect object pronouns only appear in the verb if the direct object is third singular [4.2.1.2] (or if the verb is middle which *baɖ* is not) it is generally permissible to delete *nukunu*.

- (361) *ɲumbabaɖnu tʲu tayiɛ*

In fact, the sex of the referent of the direct object is not recoverable in this deletion but context will normally make this clear.

The instrumental noun phrase, *tʷu tayiɕe*, is also redundant. Because of its function in (358) *tayi* must be an offensive weapon; to specify that it is an offensive weapon by a noun classifier [3.9.1] is unnecessary so that the noun-classifier may be deleted:

(362) *ɲumbabaɖnu tayiɕe*

The instrumental case inflection is also redundant since the only function *tayi* could reasonably have in this sentence is instrument:

(363) *ɲumbabaɖnu tayi*

Finally the tense markers, *nu* and *da*, are optionally deletable:

(364) *ɲumbabaɖ tayi*

Starting with thirteen morphemes in (358) nine deletions can be made and (364) is still only interpretable as:

"I will hit 3sg for you with a stick"

In fact it is more usual in discourse for free standing pronouns not to be stated. Of course deletions are only

permissible if what is deleted is recoverable. Non-pronominal noun-phrases cannot be deleted.

- (365) pule-je mamayyi-ø pu-ne-baḍ-nu
 old man-ERG child-ABS 3sg VIII-3sg FEM BEN-strike-FUT
 paḷḷun-nu tʸu tayi-je
 woman-DAT NC:weapon stick-INSTRUM
 "The old man will hit the child with a stick for the
 woman"

In (365) all the nominal inflections can be deleted because the word order [5.4] establishes the word order:

- (366) pule mamayyi puṇebaḍnu paḷḷun tʸu tayi

Note that where the word order was free in (365) it is not in (366). The same reading as for (365) applies to:

- (367) paḷḷun(n)u puṇebaḍnu tʸu tayi-je mamayyi pule-je

but

- (368) mamayyi pule puṇebaḍnu paḷḷun tʸu tayi

has the preferred reading:

"The child will hit the old man for the woman with a stick"

In general deletions are permissible under two conditions:

- (a) the information lost in the deletion is recoverable.
- (b) the result does not cause ambiguity.

Both these conditions are considerably tempered by context.

A form in isolation may be multiply ambiguous but in discourse it is unlikely to be even two-ways ambiguous.

For example, the verb form *panmad*^{*} has two readings:

(369) *pan-ø-baḍ*
 3sg VIII PERF-3sg-strike
 "He hit him"

(370) *pan-ø-baḍ*
 1sg VIII PERF-3sg-str-ke
 "I hit him"

5.6 Possession

Australian languages typically distinguish between alienable and inalienable possession; no such distinction is found in *Mujinykata*. Possession is indicated by apposition in which the possessor follows what is possessed:

(371) *tamul ḡayɪ*
 spear 1sg
 "my spear"

(372) *kamal ḡayɪ*
 eye 1sg
 "my eye"

* Resulting from MP-7.

The resulting possessive construction behave like other nominals
in that they may occur with the full range of nominal inflections,
for instance:

- (373) natan nayi-je lawanga pam-wal
 brother lsg-ERG wallaby 3sg I PERF-spear
 tamul nayi-je
 spear lsg-INSTRUM
 "My brother speared the wallaby with my spear"

Possession involving a second possessive construction works
in the same way:

- (374) wanangal nayi
 "my doctor"

- (375) natan wanangal nayi
 brother doctor lsg
 "my doctor's brother"

- (376) yirt'ip natan wanangal nayi
 cat brother doctor lsg
 "my doctor's brother's cat"

Note that the ordering is crucial since the meaning of (375)
changes considerably (but predictably) with a change in order:

- (377) wanangal natan nayi
 doctor brother lsg
 "my brother's doctor"

5.7 Comparison

Comparison is expressed in Muɔinypata by:

- (a) opposing opposites.
- (b) opposing positive with negative

(378) tamul ɲayi pata tamul nʲinʲi wiye
 spear 1sg good spear 2sg bad
 "My spear is good, your spear is bad; my spear
 is better than yours"

(379) nukunu-ka ku deɟet lawanga
 3sg MASC-TOPIC NC:meat mob wallaby
 na-pir-da-ɟini
 3sg USING FOOT-hunt-IMPERF-3sg SIT
 nukunu-wa ma-ku
 3sg MASC-EMPH NEG-NC:meat
 "He was hunting (and got, by implication) a lot of
 wallabies but he got nothing"

Comparison in terms of similarity is expressed by ɲinipunʲ [4.3.13].

5.8 Derivation

Derivational morphology is as meagre as verbal morphology is rich in Muɔinypata. Apart from the comitative suffix -ma [4.1] which derives a nominal from a nominal there are no derivational affixes.

To form a noun from a verb one uses a relative clause [5.9] which in Muɔinypata is simply a sentence acting as nominal (under certain conditions) with no overt marking. From a verb root, $y_1et^yit^y$

"teach", "teacher" is simply expressed as "one who habitually teaches (people)". The resulting expression behaves as a nominal appearing with nominal inflections, for instance:

- (380) kaḍu wuḷan-wun-yetʔitʔwuḷan-
 NC:person 3sg INVISIBLE MOVE PERF-3pl-teach-3sg INVISIBLE MOVE PERF-
 ʔe* ḡayi-ø pan-ḡi-baḍ
 ERG 1sg-ABS 3sg VIII PERF-1sg-strike
 "The one who habitually teaches them hit me; the teacher
 hit me"

There are a few instances of a root appearing in a nominal and a verbal stem but there does not appear to be any general process at work. For example, the form, beḡe, appears as a nominal stem; beḡe "vomit" and as a verbal stem with the auxiliary, SIT; ḡibebenu "I will vomit". The form, puḷ, appears reduplicated as a nominal: puḷpuḷ "washing" and with an auxiliary (XIII) as a transitive or intransitive verb: maḡuḷnu "I will wash (it/him)". There is at best a tenuous link between the adjective, yiḍiwe "ashamed":

- (381) ḡayi-ka yiḍiwe kunuḡaḡka
 1sg-TOPIC ashamed little
 "I'm a bit ashamed"

and the verb root, weḍi "cause (someone) to be ashamed".

* This form becomes	* wuḷanpunyetʔitʔwuḷanḡe	by MP-1
then	* wuḷanpuntʔetʔitʔwuḷanḡe	by MP-3
and finally	wuḷanpuntʔetʔitʔwuḷante	by MP-5

- (382) $\eta a y i - j e \quad n \gamma i n \gamma i - \emptyset \quad \eta a m - n \gamma i - w e \dot{d} i$
 1sg-ERG 2sg-ABS 1sg I PERF-2sg-shame
 "I caused you to be ashamed"

In general, expressions which, in other Australian languages, would require an inchoative suffix (he became a young man; he became thin) or a causative suffix (he will make it long) are handled by the inchoative particle, $w a \dot{d} a$ [4.3.10] as follows:

- (383) $n u k u n u - k a \quad k a \dot{d} u \quad k i g a y y i \quad w a \dot{d} a$
 3sg MASC-TOPIC NC:person young man INCHOATIVE
 "He became a young man"

- (384) $n u k u n u - k a \quad w a \dot{d} i \quad w a \dot{d} a$
 3sg MASC-TOPIC thin INCHOATIVE
 "He became thin"

- (385) $n a n \gamma d \gamma i \quad m a - w a t a - n u \quad p a \eta u - k a \quad p a \eta u y y i$
 NC:thing 3sg XIII-make-FUT that-TOPIC long
 $w a \dot{d} a$
 INCHOATIVE
 "He will make it; it will become long ie. he will
 make it long"

Many Australian languages use a causative affix on a verb stem to convert an intransitive verb to a transitive verb. *Mujinypata* just uses different verb roots, as English has separate verb roots "kill" and "die" compared to Turkish "cause to die ("die" plus a causative affix)" and "die"

- (386) *ḡayl-∅ ḡam-winʸikat*
 1sg-ABS 1sg I PERF-make a mistake
 "I made a mistake"
- (387) *ḡayl-je nʸinʸi-∅ ḡam-nʸi-mawiye*
 1sg-ERG 2sg-ABS 1sg I PERF-2sg-cause to make a mistake
 "I caused you to make a mistake"
- (388) *ḡe-nam-nu*
 1sg I REFL-be frightened-FUT
 "I will be frightened"
- (389) *ḡayl-∅ ḡa-mba-werwer-nu* *nʸinʸi-nu*
 1sg-ABS 1sg I-2sg BEN-frighten-FUT 2sg-DAT
 "I will cause you to be frightened"

There are no constructions akin to passive (converting a transitive sentence into an intransitive sentence) or anti-passive (again converting a transitive sentence into an intransitive sentence but in this case converting a deep transitive subject into intransitive subject function, the object going into an oblique case) in Muɿinypata.

Reflexive and reciprocal constructions [4.2.8-9] convert underlying transitive sentences into intransitive sentences.

The main purpose of this section has been to point out how Muɿinypata expresses what is carried out largely by derivational morphology in most Australian languages [Dixon, 1972:16].

5.9 Relative Clauses.

Relative clauses in Muɔinypata can be formed when an NP of any sentence has the same referent as the NP of some other sentence. One sentence can then be embedded in the other with one of the common NP's deleted and the embedded sentence immediately following the remaining NP. There is no other marking of relative clauses. Two sentences can be combined as follows:

(390) mutYinga paṇanduwi* mundakṇayya

"The old woman arrived earlier"

(391) mutYingaje ṇayi paṇṇibaḍ

"The old woman hit me"

(392) mutYinga paṇanduwi mundakṇayyaje ṇayi paṇṇibaḍ

"The old woman who arrived earlier hit me"

(393) mutYingaje ṇayi paṇṇibaḍ paṇanduwi mundakṇayya

"The old woman who hit me arrived earlier"

(392) is derived from (391) as matrix sentence into which (390) is embedded as constituent sentence. Note that the constituent sentence is treated syntactically as a NP receiving an ergative case marking, -je. (393) is also derived from (390) and (391) but with (390) as the matrix sentence and (391) as the constituent sentence. Note that it is the antecedent NP which is deleted not the constituent NP, otherwise we would have for (393):

* For the paradigm of the irregular verb "arrive" see Appendix 2 (at the end of the intransitive-type auxiliaries).

(394) *mutyinga nayi panjibaḍ paṇanduwi mundakṇayya

Further examples are:

(395) mutyingaṇe nayi pamṇiṇkaḍu paṇu kaḷim

"The old woman who saw me is standing over there"

from

(396) mutyingaṇe nayi pamṇiṇkaḍu

"The old woman saw me"

(397) mutyinga paṇu kaḷim

"The old woman is standing over there"

and

(398) mutyingaṇe puleṇe nayi panjibaḍ pamṇiṇkaḍu

"The old woman saw me whom the old man hit"

from (396) and

(399) puleṇe nayi panjibaḍ

"The old man hit me"

nayi may also appear before puleṇe in (398) instead of after it.

An example of a relative clause with an instrumental NP as its antecedent follows.

(400) ylle gayi tʃu kumukur
 father lsg NC:weapon club
 mam-ŋa-wata gayi-nu
 3sg XIII PERF-lsg BEN-make lsg-DAT
 "My father made a club for me"

(401) gayi-je nʃinʃi-∅ ŋu-nʃi-baɗ-nu
 lsg-ERG 2sg-ABS lsg VIII-2sg-strike
 tʃu kumukur-(je/)te
 NC:weapon club-INSTRUM
 "I will hit you with a club"

(402) gayi-je nʃinʃi ŋunʃibaɗnu tʃu kumukurte yile gayi
 mamŋawata gayinu
 "I will hit you with the club my father made for me"

(402) suggests that it is the common NP in the constituent sentence (400) which is deleted while (393) suggests that it is the co-referent NP in the matrix sentence which is to be deleted; (398) allows either. The answer is difficult to determine since these sentences are rather artificial: they can be elicited and be found acceptable by a consensus but native speakers tend to say "We don't really talk that way". Simple juxtaposition of sentences (without embedding) and the use of affixes like ka and wa [4.5.1-2] are preferred. (402) would be more usually rendered by:

(403) ŋunʃibaɗnu tʃu kumukur panaka yile gayi mamŋawata
 "I'll hit you with a club; that's the one my father
 made for me"

A relative clause may itself consist of more than one sentence provided each sentence has a common NP. For example, these sentences all have a common NP:

(404) pule mananga pamar- ϕ -we- ϕ
 old man NEG head hair-3sg-head-ABS
 "The old man is bald"

(405) pule lawalima tyipmam nitYima bukmandar
 old man trousers black shirt red
 "The old man has black trousers and a red shirt"

(406) pule ϕ im η aja tungu
 old man 3sg SIT PERF LOC fire
 "The old man is sitting near the fire"

and can be combined into one sentence:

(407) pule mananga pamarwe lawalima tyipmam nitYima
 bukmandar ϕ im η aja tungu
 "The bald old man with the black trousers and red
 shirt is sitting near the fire"

(407) in turn can theoretically be embedded into a sentence like (399) but native speakers would not spontaneously make such utterances. Significantly, when native speakers found the sentence resulting from embedding (407) in (399) they would only allow:

- (408) pule mananga pamarwe lawalima tyipmam nitYima
 bukmandar ðim ɲaɹa tungu ɲayi paŋɪbaɖ
 "The bald old man with the black trousers and red
 shirt who is sitting near the fire hit me"

they would not accept:

- (409) *pule mananga pamarwe lawalima tyipmam nitYima
 bukmandar ðim ɲaɹa tungu_{ɹe} ɲayi paŋɪbaɖ

nor

- (410) *pule_{ɹe} mananga pamarwe lawalima tyipmam nitYima
 bukmandar ðim ɲaɹa tungu ɲayi paŋɪbaɖ

That is, a case making inflection was not acceptable either on the relative clause as a whole (409) as it was acceptable in (392) nor on the common NP, pule (410). This is not merely because the ergative case-marking is redundant here [5.5]. I suspect (409) is unacceptable for the same sort of reasons as this English sentence is unacceptable:

- (411) *The policeman locked the bald old man with the black trousers and red shirt who was sitting near the fire up.

In the English sentence the element "up" of the phrasal verb "lock up" just has too much separating it from "lock". Native speakers of English can only give informal and inconsistent decisions about how much is "too much": I expect the same applies to Muɹinypata speakers!

5.10 Other Subordinate Clauses

Other subordinate clauses do not insist on a common NP in the matrix sentences. Conditional clauses [4.3.7] do not require a common NP in the protasis and apodosis, for example.

Subordinate clauses are either marked by particles [4.3] or appear in two constructions without marking.

Apart from the marked variety of temporal clause which need not be subordinate [4.5.4] temporal differences between clauses are signalled by the syntactic ordering of the clauses. Thus one clause is considered temporally prior to another if it appears before it (and there is no other marking).

- (412) palgun paḡanduwi puleḡe ḡayi paḡibaḡ
 "After the woman arrived the old man hit me"

There are also clauses which do not require common NP's nor the same temporal setting:

- (413) na-ju puna-ḡewuyi-nu
 2sg XIII-3du SIB 3du SIB USING FOOT-come out-FUT
 "Tell them two siblings to come out"

- (414) pam-yekum* ḡaḡa kama ḡini-da
 3sg I PERF-forget where perhaps 3sg SIT-IMPERF
 "He forgot where he was"

* Becomes panʔtʔekum by MP-2.

- (415) ga- ϕ -tarpu-nu tangu ma-wata-nu
 1sg I-3sg-ask-FUT what 1sg XIII-do-FUT
 "I will ask him what he intends doing"

- (416) nana nuunu katu
 "Tell him that I will come"

The subordinate clauses in these sentences are like what traditional grammars of English would call noun clauses, (413) or (416) or indirect questions (414-5). Both these constructions in English can be interpreted as embedded sentences which have an "understood" antecedent. Each sentence can be paraphrased along the lines: "He forgot something viz. where he is" or "Tell him something viz. I will come".

However Mujinyata also allows clauses in direct speech:

- (417) mam-na tuju-nu katu
 1sg XIII PERF-3sg MASC BEN 2sg MOVE-FUT towards
 "I told him to come ie. I told him 'Come (here)!'"

Typically these sorts of sentences are spoken without a significant pause between their constituent clauses so that it is appropriate to treat them as single sentences. Perhaps one could say they are independent clauses in opposition. More data are required before an adequate account can be given of this construction.

6 Semantics

6.1 Noun-classification

This phenomenon was very briefly discussed earlier [3.9]. This section will attempt to give a more detailed account of the semantic basis of noun classification in Mujinypata. It should be pointed out that the apparent neatness of correlation between formal devices in a language and ideas is illusory. There are always a few "leaks" in the system imposed by the observer as Worsley [1954:287] points out:

"There is, again, no reason to presume that these systems of classification were meant to be absolute and thorough-going by the aborigines. There is a tendency towards over-systematization of modes of thought and behaviour of the aborigines by white observers, a thorough-going systematization which need not actually have ever been intended, let alone practised, by the people themselves. This tendency is particularly apparent in anthropological discussions of totemism, where limited classification of the natural and social orders by the aborigines is presented by white observers as a complete and all-inclusive scheme, or worse, as a failure by the aborigines to complete such a scheme".

With this cautionary note we will look at the noun-classes in turn.

kadu was said [3.9.1] to refer to human beings essentially, but some spirits were included. Which spirits? It seems that a spirit or mythological being who is considered more human than not will be assigned the noun-classifier kadu. Conversely a spirit or mythological being considered less than human is assigned to the ku- class. A change of behaviour or status will

engender a switch of noun classifier for a given noun but the precise nature of this switching is by no means clear in all cases. The mythological entity, Mutvinga, "The Old Woman", changed status from kaḍu to ku:

"Mutjinga was once Kadu, that is, a truly human person, not one of the self-subsistent spirits recognised within theogony [in the ku category]" [Stanner 1964:42-43].

While Mutvinga is most often assigned to the kaḍu category other self-subsistent spirits such as Kunmangur The Rainbow-Serpent is always assigned to the ku category. Although the Rainbow-Serpent is assigned human characteristics such as being addressed by kin-terms [Stanner 1964:89] he is apparently considered to partake less of humanity than is Mutvinga. Thus one hears:

(418) kaḍu mutvinga
 NC:person old woman
 "The Old Woman"

and (419) ku mutvinga
 NC:meat old woman
 "The Old Woman"

but only

(420) ku kunmangur
 NC:meat Rainbow-Serpent
 "The Rainbow-Serpent"

*kaḍu kunmangur is rejected.

For other mythological entities Stanner notes:

"The mythology, unlike that of some other regions, holds that animals are transformations of the original men. But the visual representations often differ. Mutjinga may be represented as a grotesque figure only in part recognizable as human. One drawing shows her as half-woman, half-snake. On the whole, *animal creation seems to be conceived as humanity transformed and deprived of certain powers* [italics mine]. But I regard the question as one which is not now fully decidable". [1964:39, fn. 17].

In the myths which deal with the transformation of original men into animals the change of status is directly reflected by a change in the assignment of the noun-classifier. In this sentence once the person has changed status the new status must be recognised.

(421) nukunu- ϕ ϕ im-kark ka ϕ u yibim-pup
 3sg-ABS 3sg SIT PERF-cry NC:person 3sg LIE PERF-lie
 ku ka ϕ ayt γ -nu
 NC:meat spirit-DAT
 "He is crying for the dead man".

This sentence consists of two parts:

(422) nukunu ϕ imkark ku ka ϕ ayt γ nu
 "He's crying for the (man's) spirit"

(423) ka ϕ u yibimpup
 "The man is dead"

It is human beings (kaḍu) who can die (423) not spirits (ku);
 what one is crying for is not the man (kaḍu) but his spirit (ku).

Predictably figures in the introduced Christian religion who are
 held to be first and foremost human are in the kaḍu class.
 Analogies for Christ and the Virgin Mary are derived from
 traditional culture [Falkenberg 1962:188]:

(424) kaḍu kumbit
 NC:person kangaroo (sp.)
 "Christ"

and (425) kaḍu baybayye
 NC:person female plains kangaroo
 "Virgin Mary"

To use the forms, ku kumbit or ku baybayye would be an indication
 of profound disrespect.

Some spirits are held to be typically non-human so that their
 norm noun classifier [6.2] is ku. For example, kaḗaytʷ "devil"
 is held to be very hairy, has no face and offers no resistance
 to spears (the spears passing right through its body). For these
 characteristics alone it is scarcely human and would normally occur
 as ku kaḗaytʷ "devil".

Thus there are some spirits or mythological entities which have
 a norm characterization as kaḍu others with a norm characterization
 of ku and some which may change from one category to the other.

kaḍu may also be used to specify that a person is an Aboriginal rather than a non-Aboriginal. The expression:

(426) kaḍu wanangal
 NC:person doctor
 "doctor"

may refer to any doctor but in certain contexts if one wishes to specify that the doctor is non-Aboriginal rather than Aboriginal one could say:

(427) ku wanangal
 NC:meat doctor
 "non-Aboriginal doctor"

Thus we can have a clarifying statement such as:

(428) kaḍu pana-ka kaḍu wanangal
 person that (near)-TOPIC NC:person doctor
 mananga ku wanangal"
 NEG NC:meat doctor
 "That man is an Aboriginal doctor not a white doctor"

It should be pointed out that the distinction is not just between black and non-black since we have:

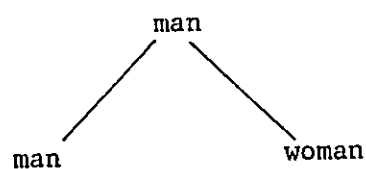
(429) kaḍu tʷipman
 NC:person black
 "black people/person"

as the general term but if the contrast needs to be made then we have:

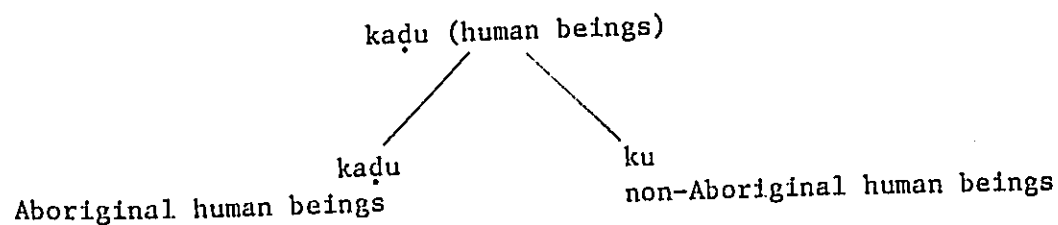
(430) ku tʷipmam
 NC:meat black
 "non-Aboriginal black person"

This expression might refer to a Fijian or Black American, for example, just in case the contrast between Aboriginal black people and non-Aboriginal black people needs to be made.

The situation is thus analogous to the English two-term system, man-woman in which one of the terms is homomorphic with the cover term for the system, ie:



For Muɣinypata this system* emerges:



* Of course one would wonder about the status of "half-caste" since such a term bridges the two categories. For a half-caste one of whose parents is Aboriginal the expression is

kaɖu bukmandar
 NC:person red
 "half-caste"

Unfortunately I have not elicited the term for "mulatto" but suspect it would be ku bukmandar.

Turning now to the ku-class it was briefly mentioned [3.9.1] that the ku-class included products derived from non-human animate nouns. Thus "headband" and "pubic tassel" both appear with ku since they are made from opossum fur eg.

(431) ku tajaɪ
 NC:meat head-band
 "head-band"

Sugar-bag (wild honey) of all sorts is assigned to the ku-class because it derives from bees which are for excellence eligible for the ku- class. Items which are superficially similar such as "honey", "treacle" and "sugar" are assigned to the residue class, as loan words:

(432) nanʔdi ani
 NC:thing honey
 "honey"

(433) nanʔdʔi tʃikaɪ
 NC:thing treacle
 "treacle"

or in directly comparable forms (cf. ku tʔitayyi "sugarbag (generic)").

(434) nanʔdʔi tʔitayyi
 NC:thing sugarbag
 "honey" (as from store)

It should not be thought that concepts not indigenous to the culture are assigned to the residue class. Loan words for "giraffe", "lion", "gun" are assigned to noun classes which are appropriate for these referents:

(435) ku dYiJap
NC:meat giraffe
"giraffe"

(436) ku layn
NC:meat lion
"lion"

(437) tungu gan
NC:fire gun
"gun"

The terms "giraffe" and "lion" have non-human animate reference and thus occur in the ku-class while "gun" being associated with fire is assigned to the noun class appropriate for such terms.

It is difficult to say why female genitalia are assigned to the ku- class. The terms involved are as follows: ku tYinu/ku tYimu "clitoris"; ku weyi "vagina" and ku midut "vulva". Two of the terms appear in the nanYdYi- class (in which all the other body part terms appear) as nanYdYi tYimu "nose" and nanYdYi weyi "hole". It may be that these body parts were assigned to a different noun-class from the rest of the body part terms in order to avoid ambiguity. Native speakers were reluctant to discuss these terms at all so that if there is any reason stemming from mythology or

any other source for the anomaly it will not be easy to discover. The investigation of the Freudian implications is left to those more practised in these matters.

In any case it is probable that some individual class memberships cannot be explained in terms of synchronic knowledge (and diachronic information is not available) cf. Dixon [1968:122]: "... it seems likely that some [individual class memberships] are WITHOUT EXPLANATION (as would be the case in any natural language: some may have had an explanation in terms of an earlier stage of the language, but the class assignment has been retained and the explanation lost as the language has altered.)" Heath (personal communication) reports that there is no general semantic basis for non-human noun class membership in Nunggubuyu.

The mi-class also distinguishes between items derived from the natural environment and those which do not appear to have an obvious connection. Flour made from bush products therefore appears in the mi- class:

(438) mi lawam
 NC:food flour
 "(bush) flour"

while the flour which appears in a packet in a shop may be assigned to the residue class if the speaker wishes to specify that it is not obviously from a natural source:

- (439) nanYdYl lawam
 NC:thing flour
 "(non-bush) flour"

The terms for "faeces"¹ are assigned to the mi- class perhaps because they are considered to be derived from (vegetable) food, vegetable food being an important part of the diet:

- (440) ml ŋukin
 NC:food faeces
 "faeces"

- (441) mi yilulul
 NC:food diarrhoea
 "diarrhoea; liquid faeces"

For the tYu- class little needs to be said other than pointing out that "weapons" would be not sufficiently specific since terms for "shield" and other defensive weapons appear in the residue class.

Of the remaining classifiers, tungu and kuua, will be discussed here. The assignment of loan-concepts to a noun-class can help to delineate the semantic boundaries of the noun-class. Terms for "bomb", "shotgun", "matches" are assigned to the tungu-class since they are associated with fire, particularly in the sense of producing fire²:

¹ "Urine", incidentally, is assigned to the residue class.

² cf. Dixon [1968:123] who reports for Dyirbal that "matches" and "pipe" are included in the same class because they are concerned with fire. In Muninypata "pipe" is in the nanYdYl-class.

(442) tungu bam
 NC:fire bomb
 "bomb"

(443) tungu metʔitʔ
 NC:fire matches
 "matches"

Potable fluids: beverages, liquid medicines and the like are
 assigned to the kuja-class:

(444) kuja tuʔuʔk
 NC:water foam
 "beer"

(445) kuja mulak
 NC:water cheeky
 "grog (rum, whiskey, brandy etc.)"

(446) kuja kapi
 NC:water coffee
 "coffee"

(447) kuja meditʔin
 NC:water medicine
 "(liquid) medicine"

but not fluids which are not drunk such as "oil".

(448) nanʔdʔi wuyʔi
 NC:thing oil
 "oil"

6.2 Membership of Noun-Classes.

Each noun can be shown to have one (and occasionally two eg. wanangal [6.1] noun class of which it is a norm member. This section will show how a number of nouns may appear in more than one noun-class under certain conditions.

How does a particular noun belong to a norm noun-class? Dixon^{*} has suggested a two-way mechanism for assignment of nouns to particular noun-classes: nature and function. According to this proposal the kaḍu, ku and mi classes would be established in terms of the nature of the referents, the tʸu- and tamul- classes would be established in terms of function (viz. offensive weapon) but some classes would be mixed. Thus ku taluwayyin "lizard (sp.)" is plainly in the ku- class according to the nature of what the noun taluwayyin refers to. On the other hand kumukur "type of fighting-club" is assigned to the tʸu-class because of its function as an offensive weapon. Finally the tunggu- class (artefacts and phenomena associated with fire) would have some nouns assigned to that class by their nature and others by their function.

In the expression:

(449) tunggu yulin
 NC:fire hot coals
 "hot coals"

*In a seminar delivered in September 1975 to a colloquium of the Linguistics and Anthropology Departments of the Australian National University, Canberra.

yulin belongs to the tungu- class by its nature; the term, tayi "stick", enters the tungu- class by its function:

(450) tungu tayi
 NC:fire stick
 "fire-stick"

Obviously there are instances where it will be difficult to say whether a noun has been assigned to a particular noun-class because of nature or function. Allowing this reservation the distinction is a useful one in the discussion of noun-classification in Mulinypata.

Most nouns belong because of their nature or function to just one noun class. This is called the norm noun-class for that noun. The norm noun-class for taṇu "barramundi (large)" predictably is ku; kaḷ "water-lily root (sp.) is mi; liṭṭpur "axe" is nanṽdṽi and so on. For nouns whose membership to a particular noun-class is so obvious through the alignment of the nature or function of the referent of the noun with the defining characteristics of the noun-classifiers [3.9.1] the overt use of the noun-classifier is redundant. That is if taṇu must obviously be in the ku- class because it is non-human and animate then to use the noun-classifier, ku, is redundant: ku taṇu gives us no more information than taṇu.

In line with this observation the noun-classifier for a noun may be deleted if it is the norm noun-classifier and very frequently is deleted. In fact the regular use of noun-classifiers is a feature of older speakers although they do allow deletions;

younger speakers seldom use them. Stanner [1964:73] reporting presumably on fieldwork started in the thirties indicates that restrictions on deletion were even tighter earlier on:

"In common speech, the prefixes are sometimes omitted although grammatical speech requires them to be used".

What happens when a noun's basic meaning is changed? We have seen that a noun may be assigned to a different noun-class if there is a change in nature. Thus the original men's change of nature from men to animals [6.1] is reflected in a change of noun-class. There may also be a change of function. For example, kunewi "billy-can" has the norm noun-classifier nan^yd^yi but if it has a change of function and becomes an offensive weapon it is assigned to the t^yu-class:

(451) gayi-je n^yin^yi-ø ɲu-n^yi-baɖ-nu
 1sg-ERG 2sg-ABS 1sg VIII-2sg-strike-FUT
 t^yu kunewi-je
 NC:weapon billy-can-INST
 "I will hit you with a billy can"

In such a sentence it is still possible to delete the noun-classifier since the context and the instrumental inflection on kunewi indicate that "billy-can" is a weapon. Similarly, consider a context wherein one picks up a dog by its hind leg and hits someone with it (the dog). "Dog" by its nature is assigned to the ku- class but by its function now takes the noun-classifier t^yu. In the context however it will be obvious although the situation is unusual that "dog" is to be assigned to

that noun-class. There will therefore be no need to state the noun-classifier with "dog". This is somewhat like the covert distinctions made in English. In a sentence like:

(452) Harry drank the tea.

it is obvious that the "tea" referred to is a beverage (not the tea-leaves!). It is still pretty obvious in

(453) Harry consumed the tea.

although the verb "consume" can select non-fluid objects. It only becomes obvious that "tea" can refer to the leaves as in a packet of tea in

(454) Harry consumed the tea even though it was too dry and crunchy for his taste.

Again the preferred reading of "tea" is tea-leaves in

(455) Harry cleared up the remainder of the spilt tea with tweezers.

although the fluid reading is just possible.

It should be pointed out that noun-classifiers may be deleted only if the deletion is recoverable. In the examples given above there has been a context in each case which means that the necessary information to assign the noun to the right noun-class is recoverable from the context. If a noun is in isolation

however it is not so easy to delete the noun-classifier and still know which noun-class the noun is to be assigned to. In a neutral context (if that is possible!) the noun tYinimin will be assigned to the ku- class and will be interpreted correctly as "bat (sp.)". In the context of a Dreamtime myth tYinimin may be interpreted as a mythological figure viz. kaḍu tYinimin "Tyinimin" or as the animal which Tyinimin became viz. ku tYinimin "bat (sp.)". If tYinimin undergoes a change of function then when quoted in isolation the noun-classifier which signals this norm-shift must be stated. If not, the noun will be interpreted according to its norm noun-class. If the carcase of a bat is being used to hold open a door so that t^yinimin has the function of a door-stop then the noun-classifier will be nan^yd^yi and must appear; if it does not then the norm interpretation will be invoked which in this instance is wrong. The generalisation that emerges is that if a noun is stated in isolation then it need not occur with a noun-classifier if there has not been a shift from the norm so tYinimin is interpreted as "bat (sp.)": if there has been one shift from the norm then the noun must occur with the noun-classifier:

(456) nan^yd^yi tYinimin
 NC:thing bat (sp.)
 "bat as thing (say door-stop)"

What happens when there are two shifts from the norm? This is not very easy to document since it is very difficult to devise a context in which there is true ambiguity and at the same time to have the double shift. At least one case can be mentioned here.

There is a body part term, paṇḍuṭpan "lung" which, by its nature, is assigned to the nan^yd^yi class. The same noun may appear with the noun-classifier, mi:

- (457) mi paṇḍuṭpan
 NC:food lung
 "lung food ie. cigarette"

It is then possible to devise a context in which "cigarette" has a change of function; as a weapon:

- (458) ḡayi-je n^yin^yi-ø ḡu-n^yi-baḡ-nu
 1sg-ERG 2sg-ABS 1sg VIII-2sg-strike-FUT
 t^yu mi paṇḍuṭpan-je
 NC:weapon NC:food lung-INST
 "I'm going to hit you with a cigarette"

In this sentence and in similar contexts there must be two noun-classifiers for one noun. If we deleted both noun classifiers we would have:

- (459) ḡayi^{je} n^yin^yi ḡun^yi^{baḡ}nu paṇḍuṭpan^{je}
 "I'm going to hit you with a lung"

which is not the interpretation required. If t^y_u is not deleted but mi is then the same interpretation applies with t^y_u appearing redundantly as it would in

(460) ḡayije nʸinʸi ḡunʸibaḡnu tʸu tʸabal-je

"I'm going to hit you with a shovel"

The norm noun-classifier for tʸabal is nanʸdʸi; the noun will be correctly interpreted in the previous sentence even if tʸu is deleted. The final possibility is to have tʸu deleted but mi included however this sentence is rejected as ungrammatical by native speakers.

(461) ḡayije nʸinʸi ḡunʸibaḡnu mi paḡduṭpanje

A possible way of explaining these data is in terms of occurrence of noun classifiers and norm-shift. For each shift from the norm a noun must appear with one noun-classifier to mark that shift. For a noun paḡduṭpan with the basic meaning of "lung":

	Shift from Norm	Noun- Classifiers	Interpretation
paḡduṭpan	0	0	lung
mi paḡduṭpan	1	1	cigarette
tʸu paḡduṭpan	1	1	lung as weapon (a kind of club?)
nanʸdʸi paḡduṭpan	1	1	lung as thing (eg. as paperweight)
tʸu mi paḡduṭpan	2	2	cigarette as weapon

It should be pointed out that this analysis is only speculative but would gain considerable support from a noun which had three shifts from the norm marked by three noun-classifiers. This remains to be elicited.

6.3 Loan Concepts.

When an Aboriginal group comes into contact with European culture new words must be created to cover the new concepts encountered.

In many cases, an English word is taken over, altered to fit the phonological patterns of the receiver language. Thus Mujinypata has:

nan ^y d ^y i t ^y ibaka	"tobacco"
tungu met ^y it ^y	"matches"
kuja kapi	"coffee"
ku buliki	"bullock"
nan ^y d ^y i nil	"nail"
ka ^u eyn ^y d ^y al	"angel"
ku pigipigi	"pig"
nan ^y d ^y i kul	"school"
nan ^y d ^y i ŋan ^y in	"onion"
nan ^y d ^y i yin ^y d ^y in	"engine"

Often existing words in Mujinypata are extended to cover the introduced concept. A loan word expressed by a noun in English might be expressed as a relative clause in Mujinypata:

- (462) nan^yd^yi kanam-balbal^{*}
 NC:thing 3sg HAB PERF-fly
 "thing which habitually flies ie. aeroplane"

^{*}This form becomes ^{*}kanammalbal by MP-7
 kanamalbal by MP-11

Words whose referents are similar in texture or appearance to the loan concept are often used; for instance: nanYdYi daɹimun "sand" is extended to mean "sugar"; nanYdYi we "bark of the paperbark tree (generic)" is equated with paper money eg. nanYdYi we bukmandar "red paperbark ie. \$20 bill".

Metaphorical naming is also found: kuɹa mulak "cheeky water ie. grog".

A couple of loan words use the comitative suffix, -ma [4.1.4]:

(463) nitYi-ma
arm-COM
"shirt"

(464) lawali-ma
lower leg-COM
"trousers"

Sometimes a change of noun class will signal a loan concept. ku tYitayyi "sugarbag (generic)" is assigned to the ku- class because sugarbag is known to be derived from animate beings (viz. bees); by contrast, the honey one gets in a jar from a store does not have so obvious an animate provenience and is assigned to the inanimate residue class: nanYdYi tYitayyi "honey" (see also [6.1]).

Particularly interesting are those words which are not obviously loans from another language nor are they extensions of meanings of words already in the language:

nan ^y d ^y i kum	"bottle"
nan ^y d ^y i kunewi	"billy (-can)"
nan ^y d ^y i mangu	"cup"
nan ^y d ^y i wudawal	"store; shop"
nan ^y d ^y i wudawul	"(water-) pipe"

None of the items in this sample list have meanings other than those stated. They do not appear to occur in neighbouring languages and native speakers assert that they are neither loan words nor words which earlier had an additional meaning.

6.4 Metaphorical Naming with Body Part Terms.

We have already seen [4.1.4] that body part terms as incorporated forms play an important role in the lexicon. Body part terms as free forms appear regularly in compounds (see also Rigsby [1976b] and Haviland [1975]). In such compounds the modifying body part term follows the noun it modifies.

- (465) t^yalput pelpit^y
 house head
 "house-head; head of house ie. roof"

Similarly,

- (466) t^yalput nu^u
 house side
 "house-side; side of house ie. wall"

Curiously body part terms which are normally taboo are not considered "bad talk" (muɹinʸ wiye) when they appear in compounds:

(467) payp ɲi
pipe penis
"shaft of pipe"

(468) payp weyi
pipe hole
"interior of bowl of pipe" (the bowl itself is payp pelpitʸ)

Such forms behave as nouns taking noun-classifier and nominal inflections. The compound select its noun-classifier according to the overall meaning of the expression. Thus tʸaɹput pelpitʸ is in the nanʸdʸi- class, but

(469) wembel pelpitʸ
type of club head
"head of club"

may be in the tʸu- class (following wembel) although it wembel pelpitʸ is just a description of part of the club it would be in the nanʸdʸi-class. Similarly types of spear are in the tamul- class but

(470) tamul taytpi
spear lip
"spear-lip ie. tip of spear"

is in the nanʸdʸi-class.

Sometimes body part terms are used metaphorically in compounds:

(471) ŋukin kamal
faeces eye
"anus"

(472) mudika me
motor-car foot
"tyre"

A body part term can be used for geographical features
for instance: paŋkin "back" is used for "ridge".

A body part term used metaphorically may also undergo
incorporation into the verb:

(473) ŋayi-ka ba-yiɬi-tal-nu
1sg-TOPIC 1sg IX-navel-cut-FUT
"I will cut off a knob (lit. navel) from a tree"

6.5 Verb Semantics.

We saw [4.2.12] that a given verb root occurs with one or more auxiliaries. It is obvious that there will be co-occurrence restrictions on which auxiliaries occur with a given verb root. Some auxiliaries cannot occur with a given verb root, some verb roots may appear with four or five auxiliaries.

The description of Muɿinypata verbs needs an account of the co-occurrence restrictions of all the auxiliaries with each verb root. Such information would need to be a part of the entry in the lexicon for each verb root. Birk [1974:188ff] gives this information for a sample 350 verb roots of Malag Malag.

The data for such an account of Muɿinypata verbs are not yet available. What material has been collected indicates that this is a separate study in itself. Many queries can be straightforwardly accepted or rejected but as many border on acceptability. For example,

(474) ɲem-bebe
 1sg SIT PERF-vomit
 "I vomited (while sitting)"

(475) ɲaɿim-bebe
 1sg STAND PERF-vomit
 "I vomited (while standing)"

are readily acceptable while

(476) ɲabim-bebe
 1sg LIE PERF-vomit
 ?"I vomited (while lying down)"

is grudgingly considered acceptable although it is plainly feasible but

(477) ɲuɲan-bebe

1sg MOVE PERF-vomit

?? "I vomited (as I went along)"

is considered definitely marginal.

A transitive verb root such as puɭ "wash" readily occurs with one auxiliary, marginally with another and definitely not with another:

(478) mam-nʸi-puɭ

1sg XIII-PERF-2sg-wash

"I washed you (using hands)"

(479) ɲunuɲam-nʸi-puɭ

1sg USING FOOT-PERF-2sg-wash

?*"I washed you (using (my) feet)".

(480) pan-nʸi-puɭ

1sg VIII PERF-2sg-wash

*"I washed you"

The grammaticality judgments in this area I would expect to be as inconclusive as for English. Consider, for example, the researcher investigating the verbs, "kick" and "punch", in English. The folk definitions might be given as:

"kick" is "strike with the foot"

"punch" is "hit with the fist"

The informant is then presented with the context of the man who has had his hands and feet amputated, the hands being sewn onto the ankles and the feet onto the wrists. The investigator then seeks judgments on sentences like:

(481) I punched the man in the face, stubbing my toe.

(482) When I kicked Harry, I broke a fingernail.

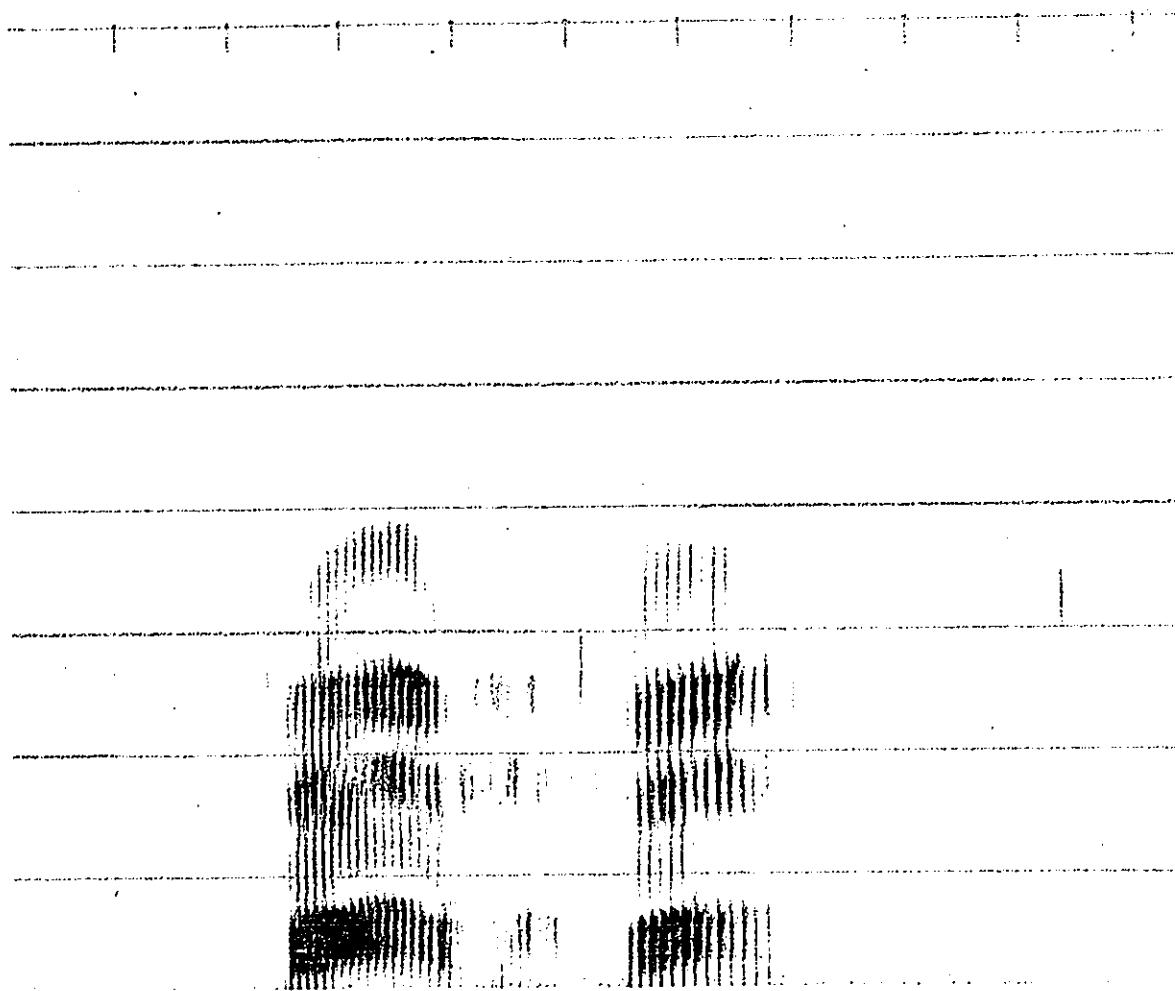
Informants' reactions are split but some accept such sentences in spite of the definitions they had previously given: some consider such sentences ridiculous, others say that "I can say it but I wouldn't".

In short I suspect a full treatment of the co-occurrence of the auxiliaries with verb roots in Mulinypata is a major undertaking - one that would need, in the end, a native speaker linguist to adequately carry out.

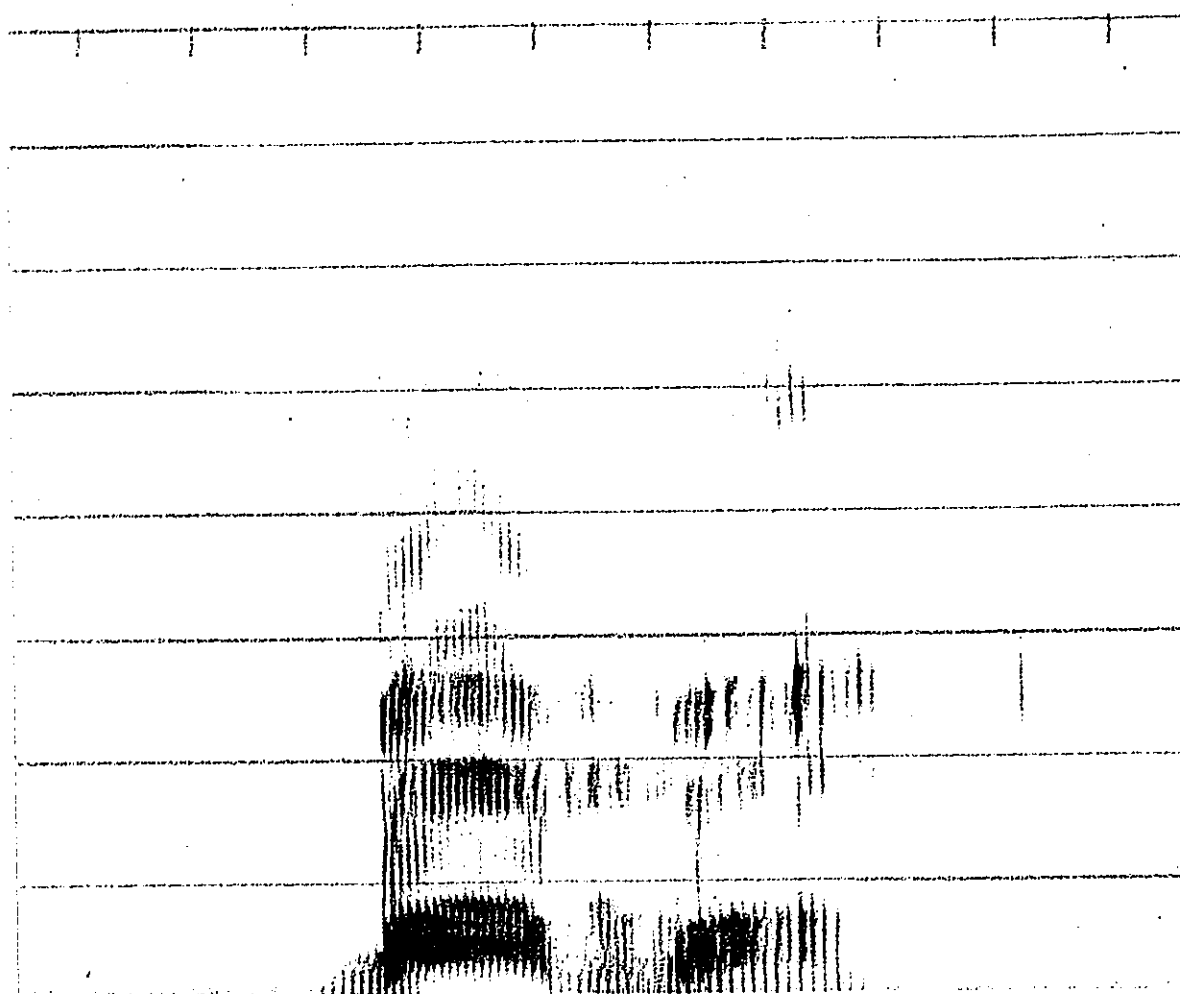
Appendix 1. Sonagrams

Sonagrams for two speakers uttering two words, pepe "below" and bebe "vomit" are presented here to illustrate the contrast between voiceless and voiced stops in Muɲinypata. These are just a sample but seem worth including in view of the fact that this distinction is quite unusual in Australian languages especially in non-medial position.

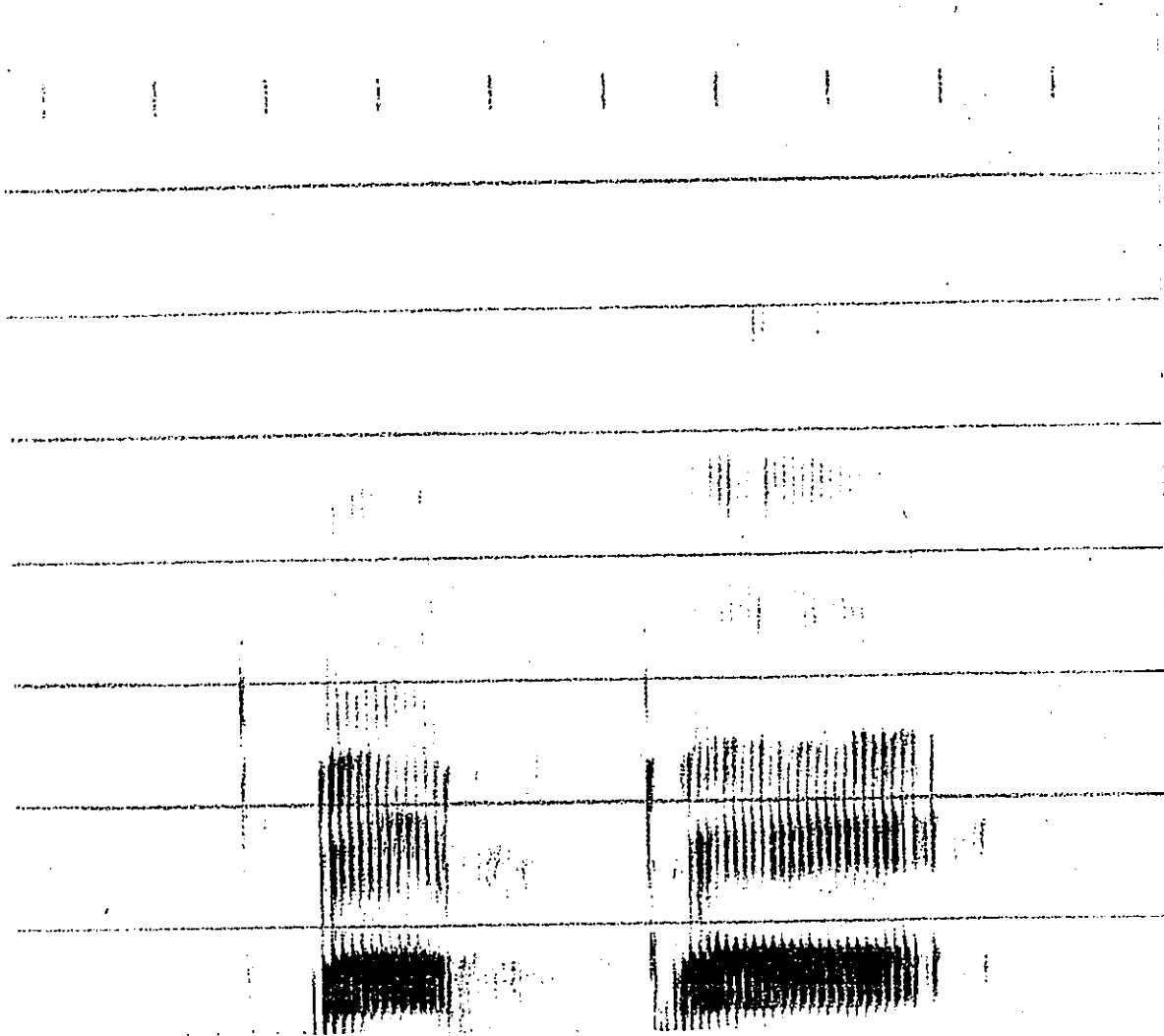
The first two words were produced by Mr Harry Kulambuɲut the second pair by Mr Jumbo ɲala.



p e p e



b e b e



P

E

P

E

| | | | | | | |

b - e - b - e

Future Paradigm of SIT

	<u>Aux Base</u>	<u>NI</u>	<u>Tense Marker</u>
1 sg	ŋi		nu
2 sg	tʏi		nu
3 sg	pi		nu
1 du inc (SIB)	pi		nu
1 du exc MASC	ŋi	ninda	nu
1 du exc FEM	ŋi	ŋinda	nu
1 du exc SIB	ŋe		nu
2 du MASC	tʏi	ninda	nu
2 du FEM	tʏi	ŋinda	nu
2 du SIB	ne		nu
3 du MASC	pi	ninda	nu
3 du FEM	pi	ŋinda	nu
3 du SIB	pe		nu
1 pc inc MASC	pi	neme	nu
1 pc inc FEM	pi	ŋime	nu
1 pc SIB	ŋuyu		nu
1 pc exc MASC	ŋe	neme	nu
1 pc exc FEM	ŋe	ŋime	nu
2 pc MASC	ne	neme	nu
2 pc FEM	ne	ŋime	nu
2 pc SIB	nuyu		nu
3 pc MASC	pe	neme	nu
3 pc FEM	pe	ŋime	nu
3 pc SIB	puyu		nu
1 pl	ŋuyu		nu
2 pl	nuyu		nu
3 pl	puyu		nu

Perfect Paradigm of SIT

	<u>Aux Base</u>	<u>NI</u>
1 sg	ŋem	
2 sg	tʏim	
3 sg	ɖim/kem	
1 du inc (SIB)	tʏim	
1 du exc MASC	ŋem	ninda
1 du exc FEM	ŋem	ninda
1 du exc SIB	ŋaɭimka	
2 du MASC	tʏim	ninda
2 du FEM	tʏim	ŋinda
2 du SIB	niɭimka	
3 du MASC	ɖim/kem	ninda
3 du FEM	ɖim/kem	ŋinda
3 du SIB	kaɭimka	
1 pc inc MASC	tʏim	neme
1 pc inc FEM	tʏim	ŋime
1 pc SIB	ŋaɭim	
1 pc exc MASC	ŋaɭimka	neme
1 pc exc FEM	ŋaɭimka	ŋime
2 pc MASC	niɭimka	neme
2 pc FEM	niɭimka	ŋime
2 pc SIB	niɭim	
3 pc MASC	kaɭimka	neme
3 pc FEM	kaɭimka	ŋime
3 pc SIB	kaɭim	
1 pl	ŋaɭim	
2 pl	niɭim	
3 pl	kaɭim	

* ɖim is used for NP which is close-up; kem for NP which is relatively remote.

Imperfect Paradigm of SIT

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ɲini	da	
2 sg	tʲini	da	
3 sg	ɖini	da	
1 du inc (SIB)	tʲini	da	
1 du exc MASC	ɲini	da	ninda*
1 du exc FEM	ɲini	da	ɲinda
1 du exc SIB	ɲiɲine	da	
2 du MASC	tʲini	da	ninda
2 du FEM	tʲini	da	ɲinda
2 du SIB	niɲine	da	
3 du MASC	ɖini	da	ninda
3 du FEM	ɖini	da	ɲinda
3 du SIB	piɲine	da	
1 pc inc MASC	tʲini	da	neme
1 pc inc FEM	tʲini	da	ɲime
1 pc SIB	ɲaɲini	da	
1 pc exc MASC	ɲaɲine	da	neme
1 pc exc FEM	ɲaɲine	da	ɲime
2 pc MASC	niɲine	da	neme
2 pc FEM	niɲine	da	ɲime
2 pc SIB	niɲini	da	
3 pc MASC	piɲine	da	neme
3 pc FEM	piɲine	da	ɲime
3 pc SIB	piɲini	da	
1 pl	ɲaɲini	da	
2 pl	niɲini	da	
3 pl	piɲini	da	

* Dual number indicators may also precede the tense marker, for example, ɲininindada.

Future Paradigm of HAB

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ɲani	nu	
2 sg	tani	nu	
3 sg	pani	nu	
1 du inc (SIB)	pani	nu	
1 du exc MASC	ɲani	nu	ninda
1 du exc FEM	ɲani	nu	ɲinda
1 du exc SIB	ɲane	nu	
2 du MASC	tani	nu	ninda
2 du FEM	tani	nu	ɲinda
2 du SIB	nane	nu	
3 du MASC	pani	nu	ninda
3 du FEM	pani	nu	ɲinda
3 du SIB	pane	nu	
1 pc inc MASC	pani	nu	neme
1 pc inc FEM	pani	nu	ɲime
1 pc SIB	ɲani	nu	
1 pc exc MASC	ɲane	nu	neme
1 pc exc FEM	ɲane	nu	ɲime
2 pc MASC	nani	nu	neme
2 pc FEM	nani	nu	ɲime
2 pc SIB	nani	nu	
3 pc MASC	pani	nu	neme
3 pc FEM	pani	nu	ɲime
3 pc SIB	pani	nu	
1 pl	ɲani	nu	
2 pl	nani	nu	
3 pl	pani	nu	

Perfect Paradigm of HAB

	<u>Aux Base</u>	<u>NI</u>
1 sg	ḡanam	
2 sg	tanam	
3 sg	kanam	
1 du inc (SIB)	tanam	
1 du exc MASC	ḡanam	ninda
1 du exc FEM	ḡanam	ḡinda
1 du exc SIB	ḡanamka	
2 du MASC	tanam	ninda
2 du FEM	tanam	ḡinda
2 du SIB	nanamka	
3 du MASC	kanam	ninda
3 du FEM	kanam	ḡinda
3 du SIB	panamka	
1 pc inc MASC	tanam	neme
1 pc inc FEM	tanam	ḡime
1 pc SIB	ḡanam	
1 pc exc MASC	ḡanamka	neme
1 pc exc FEM	ḡanamka	ḡime
2 pc MASC	nanamka	neme
2 pc FEM	nanamka	ḡime
2 pc SIB	nanam	
3 pc MASC	panamka	neme
3 pc FEM	panamka	ḡime
3 pc SIB	panam	
1 pl	ḡanam	
2 pl	nanam	
3 pl	panam	

Imperfect Paradigm of UAB

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	naḍi	da	
2 sg	taḍi	da	
3 sg	kaḍi	da	
1 du inc (SIB)	taḍi	da	
1 du exc MASC	naḍi	da	ninda
1 du exc FEM	naḍi	da	ḡinda
1 du exc SIB	naḍe	da	
2 du MASC	taḍi	da	ninda
2 du FEM	taḍi	da	ḡinda
2 du SIB	naḍe	da	
3 du MASC	kaḍi	da	monda
3 du FEM	kaḍi	da	ḡinda
3 du SIB	paḍe	da	
1 pc inc MASC	taḍi	da	neme
1 pc inc FEM	taḍi	da	ḡime
1 pc SIB	naḍi	da	
1 pc exc MASC	naḍe	da	neme
1 pc exc FEM	naḍe	da	ḡime
2 pc MASC	naḍe	da	neme
2 pc FEM	naḍe	da	ḡime
2 pc SIB	naḍi	da	
3 pc MASC	paḍe	da	neme
3 pc FEM	paḍe	da	ḡime
3 pc SIB	paḍi	da	
1 pl	naḍi	da	
2 pl	naḍi	da	
3 pl	paḍi	da	

Future Paradigm of STAND

	<u>Aux Base</u>	<u>NI</u>	<u>Tense Marker</u>
1 sg	ŋiɹa		nu
2 sg	tʋiɹa		nu
3 sg	piɹa		nu
1 du inc (SIB)	piɹa		nu
1 du exc MASC	ŋiɹa	ninda	nu
1 du exc FEM	ŋiɹa	ŋinda	nu
1 du exc SIB	ŋiɹa		nu
2 du MASC	tʋiɹa	ninda	nu
2 du FEM	tʋiɹa	ŋinda	nu
2 du SIB	niɹa		nu
3 du MASC	piɹa	ninda	nu
3 du FEM	piɹa	ŋinda	nu
3 du SIB	piɹa		nu
1 pc inc MASC	piɹa	neme	nu
1 pc inc FEM	piɹa	ŋime	nu
1 pc SIB	ŋiɹa		nu
1 pc exc MASC	ŋiɹa	neme	nu
1 pc exc FEM	ŋiɹa	ŋime	nu
2 pc MASC	ŋiɹa	neme	nu
2 pc FEM	ŋiɹa	ŋime	nu
2 pc SIB	ŋiɹa		nu
3 pc MASC	piɹa	neme	nu
3 pc FEM	piɹa	ŋime	nu
3 pc SIB	piɹa		nu
1 pl	ŋiɹa		nu
2 pl	niɹa		nu
3 pl	piɹa		nu

Perfect Paradigm of STAND

	<u>Aux Base</u>	<u>NI</u>
1 sg	ŋaɽim	
2 sg	tʃiɽim	
3 sg	kaɽim	
1 du inc (SIB)	tʃiɽim	
1 du exc MASC	ŋaɽim	ninda
1 du exc FEM	ŋaɽim	ŋinda
1 du exc SIB	ŋibimka	
2 du MASC	tʃiɽim	ninda
2 du FEM	tʃiɽim	ŋinda
2 du SIB	nibimka	
3 du MASC	kaɽim	ninda
3 du FEM	kaɽim	ŋinda
3 du SIB	kibimka	
1 pc inc MASC	tʃiɽim	neme
1 pc inc FEM	tʃiɽim	ŋime
1 pc SIB	ŋibim	
1 pc exc MASC	ŋibimka	neme
1 pc exc FEM	ŋibimka	ŋime
2 pc MASC	nibimka	neme
2 pc FEM	nibimka	ŋime
2 pc SIB	nibim	
3 pc MASC	pibimka	neme
3 pc FEM	pibimka	ŋime
3 pc SIB	kibim	
1 pl	ŋibim	
2 pl	nibim	
3 pl	pibim	

Imperfect Paradigm of STAND

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ŋiɿi	da	
2 sg	tʋiɿi	da	
3 sg	piɿi	da	
1 du inc (SIB)	tʋiɿi	da	
1 du exc MASC	ŋiɿi	(da)	ninda
1 du exc FEM	ŋiɿi	(da)	ŋinda
1 du exc SIB	ŋe	da	
2 du MASC	niɿi	(da)	ninda
2 du FEM	niɿi	(da)	ŋinda
2 du SIB	ne	da	
3 du MASC	piɿi	(da)	ninda
3 du FEM	piɿi	(da)	ŋinda
3 du SIB	pe	da	
1 pc inc MASC	tʋiɿi	da	neme
1 pc inc FEM	tʋiɿi	da	ŋime
1 pc SIB	ŋi	da	
1 pc exc MASC	ŋe	da	neme
1 pc exc FEM	ŋe	da	ŋime
2 pc MASC	ne	da	neme
2 pc FEM	ne	da	ŋime
2 pc SIB	ni	da	
3 pc MASC	pe	da	neme
3 pc FEM	pe	da	ŋime
3 pc SIB	pi	da	
1 pl	ŋi	da	
2 pl	ni	da	
3 pl	pi	da	

Tense markers in parentheses are most often not included.

Future Paradigm of MOVE

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ḡuḡu	nu	
2 sg	tuḡu	nu	
3 sg	puḡu	nu	
1 du inc (SIB)	puḡu	nu	
1 du exc MASC	ḡuḡu	nu	ninda
1 du exc FEM	ḡuḡu	nu	ḡinda
1 du exc SIB	ḡa	nu	
2 du MASC	tuḡu	nu	ninda
2 du FEM	tuḡu	nu	ḡinda
2 du SIB	na	nu	
3 du MASC	puḡu	nu	ninda
3 du FEM	puḡu	nu	ḡinda
3 du SIB	pa	nu	
1 pc inc MASC	puḡu	nu	neme
1 pc inc FEM	puḡu	nu	ḡime
1 pc inc SIB	pa	nu	
1 pc exc MASC	ḡa	nu	neme
1 pc exc FEM	ḡa	nu	ḡime
1 pc exc SIB	ḡuḡu	nu	
2 pc MASC	na	nu	neme
2 pc FEM	na	nu	ḡime
2 pc SIB	nuḡu	nu	
3 pc MASC	pa	nu	neme
3 pc FEM	pa	nu	ḡime
3 pc SIB	puḡu	nu	
1 pl	ḡuḡu	nu	
2 pl	nuḡu	nu	
3 pl	puḡu	nu	

Perfect Paradigm of MOVE

	<u>Aux Base</u>	<u>NI</u>
1 sg	ɲuʒan	
2 sg	tuʒan	
3 sg	wuʒan (invisible to speaker) kuʒan (visible to speaker)	
1 du inc (SIB)	tuʒan	
1 du exc MASC	ɲuʒan	ninda
1 du exc FEM	ɲuʒan	ɲinda
1 du exc SIB	ɲumbanka	
2 du MASC	tuʒan	ninda
2 du FEM	tuʒan	ɲinda
2 du SIB	numbanka	
3 du MASC	wuʒan kuʒan	ninda (invisible to speaker) ninda (visible to speaker)
3 du FEM	wuʒan kuʒan	ɲinda (invisible to speaker) ɲinda (visible to speaker)
3 du SIB	pumbanka kumbanka	
1 pc inc MASC	tuʒan	neme
1 pc inc FEM	tuʒan	ɲime
1 pc SIB	ɲumban	
1 pc exc MASC	ɲumbanka	neme
1 pc exc FEM	ɲumbanka	ɲime
2 pc MASC	numbanka	neme
2 pc FEM	numbanka	ɲime
2 pc SIB	numban	
3 pc MASC	pumbanka kumbanka	neme neme
3 pc FEM	pumbanka kumbanka	ɲime ɲime
3 pc SIB	pumban kumban	
1 pl	ɲumban	
2 pl	numban	
3 pl	pumban kumban	

Imperfect Paradigm of MOVE

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ɲuɲini	da	
2 sg	tuɲini	da	
3 sg	wuɲini	da	
1 du inc (SIB)	tuɲini	da	
1 du exc MASC	ɲuɲini	da	ninda
1 du exc FEM	ɲuɲini	da	ɲinda
1 du exc SIB	ɲune	da	
2 du MASC	tuɲini	da	ninda
2 du FEM	tuɲini	da	ɲinda
2 du SIB	nune	da	
3 du MASC	wuɲini	da	ninda
3 du FEM	wuɲini	da	ɲinda
3 du SIB	pune	da	
1 pc inc MASC	tuɲini	da	neme
1 pc inc FEM	tuɲini	da	ɲime
1 pc SIB	ɲuni	da	
1 pc exc MASC	ɲune	da	neme
1 pc exc FEM	ɲune	da	ɲime
2 pc MASC	nune	da	neme
2 pc FEM	nune	da	ɲime
2 pc SIB	nune	da	
3 pc MASC	pune	da	neme
3 pc FEM	pune	da	ɲime
3 pc SIB	pune	da	
1 pl	ɲuni	da	
2 pl	nuni	da	
3 pl	puni	da	

Past Negative Paradigm of MOVE

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ɲuɲi	da	
2 sg	tuɲi	da	
3 sg	wuɲi	da	
1 du inc (SIB)	tuɲi	da	
1 du exc MASC	ɲuɲi	da	ninda
1 du exc FEM	ɲuɲi	da	ɲinda
1 du exc SIB	ɲuye	da	
2 du MASC	tuɲi	da	ninda
2 du FEM	tuɲi	da	ɲinda
2 du SIB	nuye	da	
3 du MASC	wuɲi	da	ninda
3 du FEM	wuɲi	da	ɲinda
3 du SIB	puye	da	
1 pc inc MASC	tuɲi	da	neme
1 pc inc FEM	tuɲi	da	ɲime
1 pc SIB	ɲuyi	da	
1 pc exc MASC	ɲuye	da	neme
1 pc exc FEM	nuye	da	ɲime
2 pc MASC	nuye	da	neme
2 pc FEM	nuye	da	ɲime
2 pc SIB	nuyi	da	
3 pc MASC	puye	da	neme
3 pc FEM	puye	da	ɲime
3 pc SIB	puyi	da	
1 pl	ɲuyi	da	
2 pl	nuyi	da	
3 pl	puyi	da	

Future Paradigm of USING FOOT

	<u>Aux Root</u>	<u>NI</u>	<u>Tense Marker</u>
1 sg	ḡunu		nu
2 sg	tunu		nu
3 sg	punu		nu
1 du inc (SIB)	punu		nu
1 du exc MASC	ḡunu	ninda	nu
1 du exc FEM	ḡunu	ḡinda	nu
1 du exc SIB	ḡunu		nu
2 du MASC	tunu	ninda	nu
2 du FEM	tunu	ḡinda	nu
2 du SIB	nuna		nu
3 du MASC	punu	ninda	nu
3 du FEM	punu	ḡinda	nu
3 du SIB	puna		nu
1 pc inc MASC	punu	neme	nu
1 pc inc FEM	punu	ḡime	nu
1 pc (SIB)	ḡunu		nu
1 pc exc MASC	ḡuna	neme	nu
1 pc exc FEM	ḡuna	ḡime	nu
2 pc MASC	nuna	neme	nu
2 pc FEM	nuna	ḡime	nu
2 pc SIB	nunu		nu
3 pc MASC	puna	neme	nu
3 pc FEM	puna	ḡime	nu
3 pc SIB	punu		nu
1 pl	ḡunu		nu
2 pl	nunu		nu
3 pl	punu		nu

Note: Each form is generally followed by a corresponding form from the paradigm of the auxiliary SIT. Thus 1 sg is more fully ḡununḡi and the 1 pl ḡununḡuyu. The number indicators of the second auxiliary are dropped.

Perfect Paradigm of USING FOOT

	<u>Aux Base</u>	<u>NI</u>
1 sg	ḡunugam	
2 sg	tunugam	
3 sg	nugam [*]	
1 du inc (SIB)	tunugam	
1 du exc MASC	ḡunugam	ninda
1 du exc FEM	ḡunugam	ḡinda
1 du exc SIB	ḡunugamka	
2 du MASC	tunugam	ninda
2 du FEM	tunugam	ḡinda
2 du SIB	nunugamka	
3 du MASC	nugam	ninda
3 du FEM	nugam	ḡinda
3 du SIB	punugamka	
1 pc inc MASC	tunugam	neme
1 pc inc FEM	tunugam	ḡime
1 pc SIB	ḡunugam	
1 pc exc MASC	ḡunugamka	neme
1 pc exc FEM	ḡunugamka	ḡime
2 pc MASC	nunugamka	neme
2 pc FEM	nunugamka	ḡime
2 pc SIB	nunugam	
3 pc MASC	punugamka	neme
3 pc FEM	punugamka	ḡime
3 pc SIB	punugam	
1 pl	ḡunugam	
2 pl	nunugam	
3 pl	punugam	

*This form and its derivatives viz. 3 du MASC/FEM are replaced by kunugam when the sense is "he is on his way now", "they are on their way now". Each form is followed by the appropriate form of the auxiliary SIT.

Imperfect Paradigm of USING FOOT

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ɲuna	da	
2sg	tuna	da	
3sg	na	da	
1 du inc (SIB)	tuna	da	
1 du exc MASC	ɲuna	da	ninda
1 du exc FEM	ɲuna	da	ɲinda
1 du exc SIB	ɲune	da	
2 du MASC	tuna	da	ninda
2 du FEM	tuna	da	ɲinda
2 du SIB	nune	da	
3 du MASC	na	da	ninda
3 du FEM	na	da	ɲinda
3 du SIB	pune	da	
1 pc inc MASC	tuna	da	neme
1 pc inc FEM	tuna	da	ɲime
1 pc SIB	ɲuna	da	
1 pc exc MASC	ɲune	da	neme
1 pc exc FEM	ɲune	da	ɲime
2 pc MASC	nune	da	neme
2 pc FEM	nune	da	ɲime
2 pc SIB	nuna	da	
3 pc MASC	pune	da	neme
3 pc FEM	pune	da	ɲime
3 pc SIB	puna	da	
1 pl	ɲuna	da	
2 pl	nuna	da	
3 pl	puna	da	

plus suffixed forms of the auxiliary SIT.

Past Negative Paradigm of USING FOOT

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ɲuni	da	
2 sg	tuni	da	
3 sg	nuwi	da	
1 du inc (SIB)	tuni	da	
1 du exc MASC	ɲuni	da	ninda
1 du exc FEM	ɲuni	da	ɲinda
1 du exc SIB	ɲune	da	
2 du MASC	tuni	da	ninda
2 du FEM	tuni	da	ɲinda
2 du SIB	nune	da	
3 du MASC	nuwi	da	ninda
3 du FEM	nuwi	da	ɲinda
3 du SIB	pune	da	
1 pc inc MASC	tuni	da	neme
1 pc inc FEM	tuni	da	ɲime
1 pc SIB	ɲuni	da	
1 pc exc MASC	ɲune	da	neme
1 pc exc FEM	ɲune	da	ɲime
2 pc MASC	nune	da	neme
2 pc FEM	nune	da	ɲime
2 pc SIB	nuni	da	
3 pc MASC	pune	da	neme
3 pc FEM	pune	da	ɲime
3 pc SIB	puni	da	
1 pl	ɲuni	da	
2 pl	nuni	da	
3 pl	puni	da	

Note: These forms do not have suffixed form from the SIT auxiliary paradigm, unlike the other tenses.

Future Paradigm of BE ALOFT

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ɲinda	nu	
2sg	tʲinda	nu	
3sg	pinda	nu	
1 du inc (SIB)	pinda	nu	
1 du exc MASC	ɲinda	nu	ninda
1 du exc FEM	ɲinda	nu	ɲinda
1 du exc SIB	ɲinda	nu	(?)
2 du MASC	tʲinda	nu	ninda
2 du FEM	tʲinda	nu	ɲinda
2 du SIB			
3 du MASC	pinda	nu	ninda
3 du FEM	pinda	nu	ɲinda
3 du SIB			
1 pc inc MASC	pinda	nu	neme
1 pc inc FEM	pinda	nu	ɲime
1 pc SIB	-		
1 pc exc MASC	ɲinda	nu	neme
1 pc exc FEM	ɲinda	nu	ɲime
2 pc Masc	ninda	nu	neme
2 pc FEM	ninda	nu	ɲime
2 pc SIB	-		
3 pc MASC	pinda	nu	neme
3 pc FEM	pinda	nu	ɲime
3 pc SIB	-		
1 pl	-		
2 pl	-		
3 pl	-		

Note: Paradigm needs further checking (with more informants).

Plural forms are rendered by HAB auxiliary with verb root ɭa "climb"
eg. ɲani|anu "we will all climb".

Perfect Paradigm of BE ALOFT

	<u>Aux Base</u>	<u>NI</u>
1sg	ŋanʏdʏim	
2sg	tʏinʏdʏim	
3sg	pinʏdʏim	
1 du inc (SIB)	tʏinʏdʏim	
1 du exc MASC	ŋanʏdʏim	ninda
1 du exc FEM	ŋanʏdʏim	ŋinda
1 du exc SIB	ŋanʏdʏimka	
2 du MASC	tʏinʏdʏim	ninda
2 du FEM	tʏinʏdʏim	ŋinda
2 du SIB	nanʏdʏimka	
3 du MASC	pinʏdʏim	ninda
3 du FEM	pinʏdʏim	ŋinda
3 du SIB	panʏdʏimka	
1 pc inc MASC	tʏinʏdʏim	neme
1 pc inc FEM	tʏinʏdʏim	ŋime
1 pc SIB	-	
1 pc exc MASC	ŋanʏdʏimka	neme
1 pc exc FEM	ŋanʏdʏimka	ŋime
2 pc MASC	nanʏdʏimka	neme
2 pc FEM	nanʏdʏimka	ŋime
2 pc SIB	-	
3 pc MASC	panʏdʏimka	neme
3 pc FEM	panʏdʏimka	ŋime
3 pc SIB	-	
1 pl	-	
2 pl	-	
3 pl	-	

Imperfect Paradigm of BE ALOFT

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ŋindanʏi	da	
2sg	tʏindanʏi	da	
3sg	pindanʏi	da	
1 du inc (SIB)	tʏindanʏi	da	
1 du exc MASC	ŋindanʏi	da	ninda
1 du exc FEM	ŋindanʏi	da	ŋinda
1 du exc SIB	ŋindanʏi	da	
2 du MASC	tʏindanʏi	da	ninda
2 du FEM	tʏindanʏi	da	ŋinda
2 du SIB	nindanʏi	da	
3 du MASC	pindanʏi	da	ninda
3 du FEM	pindanʏi	da	ŋinda
3 du SIB	pindanʏi	da	
1 pc inc MASC	tʏindanʏi	da	neme
1 pc inc FEM	tʏindanʏi	da	ŋime
1 pc SIB	-		
1 pc exc MASC	ŋindanʏi	da	neme
1 pc exc FEM	ŋindanʏi	da	ŋime
2 pc MASC	nindanʏi	da	neme
2 pc FEM	nindanʏi	da	ŋime
2 pc SIB	-		
3 pc MASC	pindanʏi	da	neme
3 pc FEM	pindanʏi	da	ŋime
3 pc SIB	-		
1 pl	-		
2 pl	-		
3 pl	-		

Neg past is identical except ŋ substitutes for nʏ in each form
 thus 1sg ŋindanʏida 2sg tʏindanʏida etc.

Future Paradigm of LIE

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ɲu	nu	
2sg	tu	nu	
3sg	pu	nu	
1 du inc (SIB)	pu	nu	
1 du exc MASC	ɲu	nu	ninda
1 du exc FEM	ɲu	nu	ɲinda
1 du exc SIB	-		
2 du MASC	tu	nu	ninda
2 du FEM	tu	nu	ɲinda
2 du SIB	-		
3 du MASC	pu	nu	ninda
3 du FEM	pu	nu	ɲinda
3 du SIB	-		
1 pc inc MASC	pu	nu	neme
1 pc inc FEM	pu	nu	ɲime
1 pc SIB	-		
1 pc exc MASC	ɲu	nu	neme
1 pc exc FEM	ɲu	nu	ɲime
2 pc MASC	nu	nu	neme
2 pc FEM	nu	nu	ɲime
2 pc SIB	-		
3 pc MASC	pu	nu	neme
3 pc FEM	pu	nu	ɲime
3 pc SIB	-		
1 pl	-		
2 pl	-		
3 pl	-		

Missing forms in the paradigm are normally expressed by the appropriate form of the auxiliary SIT with the verb root ɲurkurk "lie" as: 1 pl ɲuyɲurkurknu. Plural forms like 1 pl ɲurkurknu have also been observed but 1 pl *ɲunu is not acceptable.

Perfect Paradigm of LIE

	<u>Aux Base</u>	<u>NI</u>
1sg	ŋabim	
2sg	tʏibim	
3sg	yibim (near) kabim (remote and invisible)	
1 du inc (SIB)	tʏibim	
1 du exc MASC	ŋabim	ninda
1 du exc FEM	ŋabim	ŋinda
1 du exc SIB	-	
2 du MASC	tʏibim	ninda
2 du FEM	tʏibim	ŋinda
2 du SIB	-	
3 du MASC	yibim/kabim (as above)	ninda
3 du FEM	yibim/kabim (as above)	ŋinda
3 du SIB	-	
1 pc inc MASC	tʏibim	neme
1 pc inc FEM	tʏibim	ŋime

No other forms attested.

Note that this is a vindication of the interpretation of auxiliary paradigms which generates the paradigm from the singular and plural forms. In this paradigm there are no plural forms and it is just those forms which are generated from plural forms that do not appear, all the forms which we would expect to be generated by the singular forms do in fact appear. However the future paradigm of "LIE" with its "tenuous" plural forms vacillates, having paucal non-sibling forms but not having dual sibling forms from which they are formed, the dual sibling forms themselves being formed from plurals.

The missing forms are rendered by forms from the auxiliary SIT with the verb root ŋurkurk "lie" eg. ŋiɭimŋurkurk "we all lay down".

Imperfect (and Past Negative) Paradigm of LIE

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ŋu	da	
2sg	tu	da	
3sg	yu	da	
1 du inc (SIB)	tu	da	
1 du exc MASC	ŋu	da	ninda
1 du exc FEM	ŋu	da	ŋinda
1 du exc SIB	-		
2 du MASC	tu	da	ninda
2 du FEM	tu	da	ŋinda
2 du SIB	-		
3 du MASC	yu	da	ninda
3 du FEM	yu	da	ŋinda
3 du SIB	-		
1 pc inc MASC	tu	da	neme
1 pc inc FEM	tu	da	ŋime

No other forms attested. See note to perfect paradigm of "lie".

Future Paradigm of DO

	<u>Aux Base</u>	<u>Ten</u>
1 sg	ni	nu
2 sg	tyi	nu
3 sg	pi	nu
1 du inc (SIB)	pi	nu
1 du exc MASC	ni	nu
1 du exc FEM	ni	nu
1 du exc SIB	ni	nu
2 du MASC	tyi	nu
2 du FEM	tyi	nu
2 du SIB	ni	nu
3 du MASC	pi	nu
3 du FEM	pi	nu
3 du SIB	pi	nu
1 pc inc MASC	pi	nu
1 pc inc FEM	pi	nu
1 pc SIB	ni	nu
1 pc exc MASC	ni	nu
1 pc exc FEM	ni	nu
2 pc MASC	ni	nu
2 pc FEM	ni	nu
2 pc SIB	ni	nu
3 pc MASC	pi	nu
3 pc FEM	pi	nu
3 pc SIB	pi	nu
1 pl	ni	nu
2 pl	ni	nu
3 pl	pi	nu

Note: It is only in the SIT suffix th
from the future paradigm of SIT
1 du exc SIB, 1 pc SIB and 1 pl

Perfect Paradigm of DO

	<u>Aux Base</u>	<u>NI</u>	<u>SIT Suffix</u>
1 sg	ŋɪŋam		ŋem
2 sg	tʏɪŋam		tʏɪm
3 sg	ɣɪŋam		ɖɪm
1 du inc (SIB)	tʏɪŋam		tʏɪm
1 du exc MASC	ŋɪŋam	ninda	ŋem
1 du exc FEM	ŋɪŋam	ŋinda	ŋem
1 du exc SIB	ŋɪŋamka		ŋaɭɪmka
2 du MASC	tʏɪŋam	ninda	tʏɪm
2 du FEM	tʏɪŋam	ŋinda	tʏɪm
2 du SIB	nɪŋamka		nɪɭɪmka
3 du MASC	ɣɪŋam	ninda	ɖɪm
3 du FEM	ɣɪŋam	ŋinda	ɖɪm
3 du SIB	pɪŋamka		kaɭɪmka
1 pc inc MASC	tʏɪŋam	neme	tʏɪm
1 pc inc FEM	tʏɪŋam	ŋime	tʏɪm
1 pc SIB	ŋɪŋam		ŋaɭɪmka
1 pc exc MASC	ŋɪŋamka	neme	ŋaɭɪmka
1 pc exc FEM	ŋɪŋamka	ŋime	ŋaɭɪmka
2 pc MASC	nɪŋamka	neme	nɪɭɪmka
2 pc FEM	nɪŋamka	ŋime	nɪɭɪmka
2 pc SIB	nɪŋam	-	nɪɭɪm
3 pc MASC	pɪŋamka	neme	kaɭɪmka
3 pc FEM	pɪŋamka	ŋime	kaɭɪmka
3 pc SIB	pɪŋam		kaɭɪm
1 pl	ŋɪŋam		ŋaɭɪm
2 pl	nɪŋam		nɪɭɪm
3 pl	pɪŋam		kaɭɪm

Imperfect Paradigm of DO

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>	<u>SIT Suffix</u>
1 sg	ŋiŋa	da		ŋini
2 sg	tʋiŋa	da		tʋini
3 sg	yiŋa	da		ɔini
1 du inc (SIB)	tʋiŋa	da		tʋini
1 du exc MASC	ŋiŋa	da	ninda	ŋini
1 du exc FEM	ŋiŋa	da	ŋinda	ŋini
1 du exc SIB	ŋiŋa	da		ŋiɔine
2 du MASC	tʋiŋa	da	ninda	tʋini
2 du FEM	tʋiŋa	da	ŋinda	tʋini
2 du SIB	niŋa	da		niɔine
3 du MASC	yiŋa	da	ninda	ɔini
3 du FEM	yiŋa	da	ŋinda	ɔini
3 du SIB	piŋa	da		piɔine
1 pc inc MASC	tʋiŋa	da	neme	tʋini
1 pc inc FEM	tʋiŋa	da	ŋime	tʋini
1 pc SIB	ŋiŋa	da		ŋaɔini
1 pc exc MASC	ŋiŋa	da	neme	ŋaɔine
1 pc exc FEM	ŋiŋa	da	ŋime	ŋaɔine
2 pc MASC	niŋa	da	neme	niɔine
2 pc FEM	niŋa	da	ŋime	niɔine
2 pc SIB	niŋa	da		niɔini
3 pc MASC	piŋa	da	neme	piɔine
3 pc FEM	piŋa	da	ŋime	piɔine
3 pc SIB	piŋa	da		piɔini
1 pl	ŋiŋa	da		ŋaɔini
2 pl	niŋa	da		niɔini
3 pl	piŋa	da		piɔini

Perfect Paradigm of HAVE

	<u>Aux Base</u>	<u>NI</u>
1sg	ḡanʔdʔin	
2sg	tanʔdʔin	
3sg	kanʔdʔin	
1 du inc (SIB)	tanʔdʔin	
1 du exc MASC	ḡanʔdʔin	ninda
1 du exc FEM	ḡanʔdʔin	ḡinda
1 du exc SIB	ḡanʔdʔinka	
2 du MASC	tanʔdʔin	ninda
2 du FEM	tanʔdʔin	ḡinda
2 du SIB	nanʔdʔinka	
3 du MASC	kanʔdʔin	ninda
3 du FEM	kanʔdʔin	ḡinda
3 du SIB	kanʔdʔinka	
1 pc inc MASC	tanʔdʔin	neme
1 pc inc FEM	tanʔdʔin	ḡime
1 pc SIB	ḡanʔdʔin	
1 pc exc MASC	ḡanʔdʔinka	neme
1 pc exc FEM	ḡanʔdʔinka	
2 pc MASC	tanʔdʔin*	neme
2 pc FEM	tanʔdʔin	ḡime
2 pc SIB	nanʔdʔin	
3 pc MASC	panʔdʔin	neme
3 pc FEM	panʔdʔin	ḡime
3 pc SIB	panʔdin	
1 pl	ḡanʔdʔin	
2 pl	nanʔdʔin	
3 pl	panʔdʔin	

* We would expect *nanʔdʔinkaneme for tanʔdʔinneme and
 *panʔdʔinkaneme for panʔdʔinneme

Imperfect Paradigm of HAVE

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ŋanʏdʏi	da	
2sg	tanʏdʏi	da	
3sg	kanʏdʏi	da	
1 du inc (SIB)	tanʏdʏi	da	
1 du exc MASC	ŋanʏdʏi	da	ninda
1 du exc FEM	ŋanʏdʏi	da	ŋinda
1 du exc SIB	ŋanʏdʏi	da	
2 du MASC	tanʏdʏi	da	ninda
2 du FEM	tanʏdʏi	da	ŋinda
2 du SIB	nanʏdʏi	da	
3 du MASC	kanʏdʏi	da	ninda
3 du FEM	kanʏdʏi	da	ŋinda
3 du SIB	panʏdʏi	da	
1 pc inc MASC	tanʏdʏi	da	neme
1 pc inc FEM	tanʏdʏi	da	ŋime
1 pc SIB	ŋanʏdʏi	da	
1 pc exc MASC	ŋanʏdʏi	da	neme
1 pc exc FEM	ŋanʏdʏi	da	ŋime
2 pc MASC	nanʏdʏi	da	neme
2 pc FEM	nanʏdʏi	da	ŋime
2 pc SIB	nanʏdʏi	da	
3 pc MASC	panʏdʏi	da	neme
3 pc FEM	panʏdʏi	da	ŋime
3 pc SIB	panʏdʏi	da	
1 pl	ŋanʏdʏi	da	
2 pl	nanʏdʏi	da	
3 pl	panʏdʏi	da	

Note: Each form must appear with the appropriate form of the auxiliary SIT suffixed eg. 1 pc exc MASC ŋanʏdʏidaneməŋaɿine. There is no future paradigm for HAVE.

Past Negative Paradigm of HAVE

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ŋe	da	
2 sg	tʏe	da	
3 sg	ɔe	da	
1 du inc (SIB)	tʏe	da	
1 du exc MASC	ŋe	da	ninda
1 du exc FEM	ŋe	da	ninda
1 du exc SIB	ŋeja	da	
2 du MASC	tʏe	da	ninda
2 du FEM	tʏe	da	ŋinda
2 du SIB	neja	da	
3 du MASC	ɔe	da	ninda
3 du FEM	ɔe	da	ŋinda
3 du SIB	peja	da	
1 pc inc MASC	tʏe	da	neme
1 pc inc FEM	tʏe	da	ŋime
1 pc SIB	ŋeja	da	
1 pc exc MASC	ŋeja	da	neme
1 pc exc FEM	ŋeja	da	ŋime
2 pc MASC	neja	da	neme
2 pc FEM	neja	da	ŋime
2 pc SIB	neja	da	
3 pc MASC	peja	da	neme
3 pc FEM	peja	da	ŋime
3 pc SIB	peja	da	
1 pl	ŋeja	da	
2 pl	neja	da	
3 pl	peja	da	

Future Paradigm of SAY/DO

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ɲama	nu	
2sg	tama	nu	
3sg	pama	nu	
1 du inc (SIB)	pama	nu	
1 du exc MASC	ma	nu	ninda
1 du exc FEM	ma	nu	ɲinda
1 du exc SIB	ɲiyema	nu	
2 du MASC	na	nu	ninda
2 du FEM	na	nu	ɲinda
2 du SIB	niyema	nu	
3 du MASC	ma	nu	ninda
3 du FEM	ma	nu	ɲinda
3 du SIB	piyema	nu	
1 pc inc MASC	pama	nu	neme
1 pc inc FEM	pama	nu	ɲime
1 pc SIB	ɲiyema	nu	
1 pc exc MASC	ɲiyema	nu	neme
1 pc exc FEM	ɲiyema	nu	ɲime
2 pc MASC	niyema	nu	neme
2 pc FEM	niyema	nu	ɲime
2 pc SIB	niyema	nu	
3 pc MASC	piyema	nu	neme
3 pc FEM	piyema	nu	ɲime
3 pc SIB	piyema	nu	
1 pl	ɲiyema	nu	
2 pl	niyema	nu	
3 pl	piyema	nu	

Future Paradigm of SAY/DO

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ɣama	nu	
2sg	tama	nu	
3sg	pama	nu	
1 du inc (SIB)	pama	nu	
1 du exc MASC	ma	nu	ninda
1 du exc FEM	ma	nu	ɣinda
1 du exc SIB	ɣiyema	nu	
2 du MASC	na	nu	ninda
2 du FEM	na	nu	ɣinda
2 du SIB	niyema	nu	
3 du MASC	ma	nu	ninda
3 du FEM	ma	nu	ɣinda
3 du SIB	piyema	nu	
1 pc inc MASC	pama	nu	neme
1 pc inc FEM	pama	nu	ɣime
1 pc SIB	ɣiyema	nu	
1 pc exc MASC	ɣiyema	nu	neme
1 pc exc FEM	ɣiyema	nu	ɣime
2 pc MASC	niyema	nu	neme
2 pc FEM	niyema	nu	ɣime
2 pc SIB	niyema	nu	
3 pc MASC	piyema	nu	neme
3 pc FEM	piyema	nu	ɣime
3 pc SIB	piyema	nu	
1 pl	ɣiyema	nu	
2 pl	niyema	nu	
3 pl	piyema	nu	

Perfect Paradigm of SAY/DO

	<u>Aux Base</u>	<u>NI</u>
1sg	ḡamam	
2sg	nam	
3sg	mam	
1 du inc (SIB)	tamam	
1 du exc MASC	mam	ninda
1 du exc FEM	mam	ḡinda
1 du exc SIB	ḡamamka	
2 du MASC	nam	ninda
2 du FEM	nam	ḡinda
2 du SIB	namamka	
3 du MASC	mam	ninda
3 du FEM	mam	ḡinda
3 du SIB	pamamka	
1 pc inc MASC	tamam	neme
1 pc inc FEM	tamam	ḡime
1 pc SIB	ḡamam	
1 pc exc MASC	ḡamamka	neme
1 pc exc FEM	ḡamamka	ḡime
2 pc MASC	namamka	neme
2 pc FEM	namamka	ḡime
2 pc SIB	namam	
3 pc MASC	pamamka	neme
3 pc FEM	pamamka	ḡime
3 pc SIB	pamam	
1 pl	ḡamam	
2 pl	namam	
3 pl	pamam	

Future Paradigm of BECOME

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ɲine	nu	
2sg	tʏini	nu	
3sg	pini	nu	
1 du inc (SIB)	pini	nu	
1 du exc MASC	ɲini	nu	ninda
1 du exc FEM	ɲini	nu	ɲinda
1 du exc SIB	ɲini	nu	
2 du MASC	tʏini	nu	ninda
2 du FEM	tʏini	nu	ɲinda
2 du SIB	nini	nu	
3 du MASC	pini	nu	ninda
3 du FEM	pini	nu	ɲinda
3 du SIB	pini	nu	
1 pc inc MASC	pini	nu	neme
1 pc inc FEM	pini	nu	ɲime
1 pc SIB	ɲini	nu	
1 pc exc MASC	ɲini	nu	neme
1 pc exc FEM	ɲini	nu	ɲime
2 pc MASC	nini	nu	neme
2 pc FEM	nini	nu	ɲime
2 pc SIB	nini	nu	
3 pc MASC	nini	nu	neme
3 pc FEM	nini	nu	ɲime
3 pc SIB	pini	nu	
1 pl	ɲini	nu	
2 pl	nini	nu	
3 pl	pini	nu	

What we would expect for 1 du exc SIB is ɲinenu , for 2 du SIB ninenu etc and paucal forms based on these: 1 pc exc MASC ɲinenuneme etc. What occurs results in identical forms for 1 sg, 1 du exc SIB, 1 pc SIB and 1 pl.

Perfect Paradigm of BECOME

	<u>Aux Base</u>	<u>NI</u>
1sg	ɲinam	
2sg	tʲinam	
3sg	ɖinam	
1 du inc (SIB)	tʲinam	
1 du exc MASC	ɲinam	ninda
1 du exc FEM	ɲinam	ɲinda
1 du exc SIB	ɲinamka	
2 du MASC	tʲinam	ninda
2 du FEM	tʲinam	ɲinda
2 du SIB	ninamka	
3 du MASC	ɖinam	ninda
3 du FEM	ɖinam	ɲinda
3 du SIB	pinamka	
1 pc inc MASC	tʲinam	neme
1 pc inc FEM	tʲinam	ɲime
1 pc SIB	ɲinam	
1 pc exc MASC	ɲinamka	neme
1 pc exc FEM	ɲinamka	ɲime
2 pc MASC	ninamka	neme
2 pc FEM	ninamka	ɲime
2 pc SIB	ninam	
3 pc MASC	pinamka	neme
3 pc FEM	pinamka	ɲime
3 pc SIB	pinam	
1 pl	ɲinam	
2 pl	ninam	
3 pl	pinam	

Past Negative Paradigm of BECOME

	<u>Aux Base</u>	<u>Tense Marker</u>	<u>NI</u>
1sg	ɲini	da	
2sg	tʏini	da	
3sg	ɖini	da	
1 du inc (SIB)	tʏini	da	
1 du exc MASC	ɲini	da	ninda
1 du exc FEM	ɲini	da	ɲinda
1 du exc SIB	ɲini	da	
2 du MASC	tʏini	da	ninda
2 du FEM	tʏini	da	ɲinda
2 du SIB	nini	da	
3 du MASC	ɖini	da	ninda
3 du FEM	ɖini	da	ɲinda
3 du SIB	pini	da	
1 pc inc MASC	tʏini	da	neme
1 pc inc FEM	tʏini	da	ɲime
1 pc SIB	ɲini	da	
1 pc exc MASC	ɲini	da	neme
1 pc exc FEM	ɲini	da	ɲime
2 pc MASC	nini	da	neme
2 pc FEM	nini	da	ɲime
2 pc SIB	nini	da	
3 pc MASC	pini	da	neme
3 pc FEM	pini	da	ɲime
3 pc SIB	pini	da	
1 pl	ɲini	da	
2 pl	nini	da	
3 pl	pini	da	

Note: There is no imperfect paradigm for BECOME.

Listed here are paradigms for the verb "arrive".

This verb root is exceptional in having a unique auxiliary paradigm. Any other auxiliary appears with a number of verb roots (or none at all).

There is no good reason to assign this auxiliary either to the "intransitive" or "transitive" types.

Future and Perfect Paradigms of "arrive".

	<u>Future</u>	<u>Perfect</u>
1 sg	ḡajuwinu	ḡaḡanduwi ³
2 sg	tajuwinu	taḡanduwi
3 sg	paḡajuwinu	paḡanduwi
1 du inc (SIB)	paḡajuwinu	taḡanduwi
1 du exc MASC	ḡanindaḡajuwinu	ḡaḡannindaḡajuwi ⁴
1 du exc FEM	ḡaḡindaḡajuwinu	ḡaḡaḡindaḡajuwi
1 du exc SIB	- ¹	ḡaḡanka
2 du MASC	naḡindaḡajuwinu ²	
2 du FEM	naḡindaḡajuwinu	
2 du SIB	-	naḡanka
3 du MASC	paḡindaḡajuwinu	
3 du FEM	paḡindaḡajuwinu	
3 du SIB	-	paḡanka
1 pc inc MASC	paḡajuwinuneme	taḡanduwineme
1 pc inc FEM	paḡajuwinuḡime	taḡanduwiḡime
1 pc SIB	ḡajuwinu	ḡaḡanduwi
1 pc exc MASC	ḡajuwinuneme	ḡaḡankaḡajuwineme
1 pc exc FEM	ḡajuwinuḡime	ḡaḡankaḡajuwiḡime
2 pc MASC	naḡajuwinuneme	naḡankaḡajuwineme
2 pc FEM	naḡajuwinuḡime	naḡankaḡajuwiḡime
2 pc SIB	naḡajuwinu	naḡanduwi
3 pc MASC	paḡajuwinuneme	paḡankaḡajuwineme
3 pc FEM	paḡajuwinuḡime	paḡankaḡajuwiḡime
3 pc SIB	paḡajuwinu	paḡanduwi
1 pl	ḡajuwinu	ḡaḡanduwi
2 pl	naḡajuwinu	naḡanduwi
3 pl	paḡajuwinu	paḡanduwi

1. Not yet elicited.

2. On the basis of the other "intransitive" auxiliary paradigms we would expect taḡindaḡajuwinu.

3. This form results from MR-10 [2.1.10.17].

4. By MP-11 we would expect ḡaḡanindaḡajuwi but the form above has also been accepted.

Past Negative Paradigm of "arrive"

1 sg	gejuwida
2 sg	tʃejuwida
3 sg	dejuwida
1 du inc (SIB)	tʃejuwida
1 du exc MASC	nenindajuwida
1 du exc FEM	nenindajuwida
1 du exc SIB	-
2 du MASC	tʃenindajuwida
2 du FEM	tʃenindajuwida
2 du SIB	-
3 du MASC	denindajuwida
3 du FEM	denindajuwida
3 du SIB	-
1 pc inc MASC	tʃejuwidaneme
1 pc inc FEM	tʃejuwidanjime
1 pc SIB	gejuwida
1 pc exc MASC	gejuwidaneme
1 pc exc FEM	gejuwidanjime
2 pc MASC	nejuwidaneme
2 pc FEM	nejuwidanjime
2 pc SIB	nejuwida
3 pc MASC	pejuwidaneme
3 pc FEM	pejuwidanjime
3 pc SIB	pejuwida
1 pl	gejuwida
2 pl	nejuwida
3 pl	pejuwida

2. Paradigms of "Transitive-type" Auxiliaries.

Each auxiliary is shown with a sample verb root.

A Roman numeral is used to identify each auxiliary

eg. VIII for the "strike" paradigms.

I Future paradigm of "follow"

	<u>Forms with 3sg direct object</u>	<u>Forms with non-3sg direct object</u>	<u>Direct object</u>
1 sg	ɲaɭiwaknu	ɲanɣiɭiwaknu	2 sg
2 sg	taɭiwaknu	taɲiɭiwaknu	1 sg
3 sg	paɭiwaknu	paɲiɭiwaknu	1 sg
1 du inc (SIB)	paɭiwaknu	pankuɭiwaknuninda	3 du MASC
1 du exc MASC	ɲaɭiwaknuninda	ɲanɣiɭiwaknuninda	2 sg
1 du exc FEM	ɲaɭiwaknuɲinda	ɲanɣiɭiwaknuɲinda	2 sg
1 du exc SIB	ɲaɭiwaknu	ɲanɣiɭiwaknu	2 sg
2 du MASC	taɭiwaknuninda	naɲiɭiwaknuninda	1 sg
2 du FEM	taɭiwaknuɲinda	naɲiɭiwaknuɲinda	1 sg
2 du SIB	naɭiwaknu	naɲiɭiwaknu	1 sg
3 du MASC	paɭiwaknuninda	paɲiɭiwaknuninda	1 sg
3 du FEM	paɭiwaknuɲinda	paɲiɭiwaknu	1 sg
3 du SIB	paɭiwaknu	paɲiɭiwaknu	1 sg
1 pc inc MASC	paɭiwaknuneme	pankuɭiwaknuninda	3 du MASC
1 pc inc FEM	paɭiwaknuɲime	pankuɭiwaknuninda	3 du MASC
1 pc (SIB)	paɭiwaknu	ɲankuɭiwaknuninda	3 du MASC
1 pc exc MASC	ɲaɭiwaknuneme	ɲanɣiɭiwaknuneme	2 sg
1 pc exc FEM	ɲaɭiwaknuɲime	ɲanɣiɭiwaknuɲime	2 sg
2 pc MASC	naɭiwaknuneme	naɲiɭiwaknuneme	1 sg
2 pc FEM	naɭiwaknuɲime	naɲiɭiwaknuɲime	1 sg
2 pc SIB	naɭiwaknu	naɲiɭiwaknu	1 sg
3 pc MASC	paɭiwaknuneme	paɲiɭiwaknuneme	1 sg
3 pc FEM	paɭiwaknuɲime	paɲiɭiwaknuɲime	1 sg
3 pc SIB	paɭiwaknu	paɲiɭiwaknu	1 sg
1 pl	ɲaɭiwaknu	ɲankuɭiwakninda	3 du MASC
2 pl	naɭiwaknu	naɲiɭiwaknu	1 sg
3 pl	paɭiwaknu	paɲiɭiwaknu	1 sg

Perfect Paradigm of "follow"

	<u>Forms with 3sg direct object</u>	<u>Forms with non-3sg direct object</u>	<u>Direct object</u>
1 sg	ḡandiwak	ḡamnyɪɪiwak	2 sg
2 sg	tandiwak	tamɲɪɪiwak	1 sg
3 sg	pandiwak	pamɲɪɪiwak	1 sg
1 du inc (SIB)	tandiwak	tampunkɪiwakninda	3 du MASC
1 du exc MASC	ḡandiwakninda	ḡamnyɪɪiwakninda	2 sg
1 du exc FEM	ḡandiwakɲinda	ḡamnyɪɪiwakɲinda	2 sg
1 du exc SIB	ḡaɪamkaɪiwak	ḡaɪamnyɪɪiwak	2 sg
2 du MASC	tandiwakninda	tamɲɪɪiwakninda	1 sg
2 du FEM	tandiwakɲinda	tamɲɪɪiwakɲinda	1 sg
2 du SIB	naɪamkaɪiwak	naɪamɲɪɪiwak	1 sg
3 du MASC	pandiwakninda	pamɲɪɪiwakninda	1 sg
3 du FEM	pandiwakɲinda	pamɲɪɪiwakɲinda	1 sg
3 du SIB	paɪamkaɪiwak	paɪamɲɪɪiwak	1 sg
1 pc inc MASC	tandiwakneme	tampunkɪiwakninda	3 du MASC
1 pc inc FEM	tandiwakɲime	tampunkɪiwakninda	3 du MASC
1 pc SIB	ḡaɪandiwak	ḡaɪampunkɪiwak	3 du MASC
1 pc exc MASC	ḡaɪamkaɪiwakneme	ḡaɪamnyɪɪiwakneme	2 sg
1 pc exc FEM	ḡaɪamkaɪiwakɲime	ḡaɪamnyɪɪiwakɲime	2 sg
2 pc MASC	naɪamkaɪiwakneme	naɪamɲɪɪiwakneme	1 sg
2 pc FEM	naɪamkaɪiwakɲime	naɪamɲɪɪiwakɲime	1 sg
2 pc SIB	naɪandiwak	naɪamɲɪɪiwak	1 sg
3 pc MASC	paɪamkaɪiwakneme	paɪamɲɪɪiwakneme	1 sg
3 pc FEM	paɪamkaɪiwakɲime	paɪamɲɪɪiwakɲime	1 sg
3 pc SIB	paɪandiwak	paɪamɲɪɪiwak	1 sg
1 pl	ḡaɪandiwak	ḡaɪampunkɪiwak	3 du MASC
2 pl	naɪandiwak	naɪamɲɪɪiwak	1 sg
3 pl	paɪandiwak	paɪamɲɪɪiwak	1 sg

* Forms are given in this paradigm as they would appear after all phonological adjustments have been made. Thus ḡandiwak comes from ḡam + ɪiwak [2.1.10.17]

Imperfect Paradigm of "follow"

1 sg	ḡanaɽiwakda
2 sg	tananaɽiwakda
3 sg	ḡanaɽiwakda
1 du inc (SIB)	tananaɽiwakda
1 du exc MASC	ḡanaɽiwakdaninda
1 du exc FEM	ḡanaɽiwakdaḡinda
1 du exc SIB	ḡanaɽiwakda
2 du MASC	tananaɽiwakdaninda
2 du FEM	tananaɽiwakdaḡinda
2 du SIB	naɽanaɽiwakda
3 du MASC	ḡanaɽiwakdaninda
3 du FEM	ḡanaɽiwakdaḡinda
3 du SIB	paɽanaɽiwakda
1 pc inc MASC	tananaɽiwakdaneme
1 pc inc FEM	tananaɽiwakdaḡime
1 pc SIB	ḡanaɽiwakda
1 pc exc MASC	ḡanaɽiwakdaneme
1 pc exc FEM	ḡanaɽiwakdaḡime
2 pc MASC	naɽanaɽiwakdaneme
2 pc FEM	naɽanaɽiwakdaḡime
2 pc SIB	naɽanaɽiwakda
3 pc MASC	paɽanaɽiwakda
3 pc FEM	paɽanaɽiwakda
3 pc SIB	paɽanaɽiwak
1 pl	ḡanaɽiwakda
2 pl	naɽanaɽiwakda
3 pl	paɽanaɽiwakda

II. Principal Parts of *ŋiɭabaydʏnu* "I shall look at it".

VR = *baydʏ* "look at"

Future

1 sg	<i>ŋiɭabaydʏnu</i>	1 pl	<i>ŋiɭabaydʏnu</i>
2 sg	<i>tʏiɭabaydʏnu</i>	2 pl	<i>niɭabaydʏnu</i>
3 sg	<i>piɭabaydʏnu</i>	3 pl	<i>piɭabaydʏnu</i>

Perfect

1 sg	<i>ŋiɭaŋaŋbaydʏ</i>	1 pl	<i>ŋaŋaŋbaydʏ</i>
2 sg	<i>tʏiɭaŋaŋbaydʏ</i>	2 pl	<i>naŋaŋbaydʏ</i>
3 sg	<i>diɭaŋaŋbaydʏ</i>	3 pl	<i>paŋaŋbaydʏ</i>

Imperfect

1 sg	<i>ŋiɭabaydʏda</i>	1 pl	<i>ŋiɭabaydʏda</i>
2 sg	<i>tʏiɭabaydʏda</i>	2 pl	<i>niɭabaydʏda</i>
3 sg	<i>diɭabaydʏda</i>	3 pl	<i>piɭabaydʏda</i>

plus suffixed form of SIT.

Past Negative

1 sg	<i>ŋiɭaŋibaydʏda</i>	1 pl	<i>ŋiɭaŋibaydʏda</i>
2 sg	<i>tʏiɭaŋibaydʏda</i>	2 pl	<i>niɭaŋibaydʏda</i>
3 sg	<i>diɭaŋibaydʏda</i>	3 pl	<i>piɭaŋibaydʏda</i>

III. Principal Parts of ȝilabilbilnu "I will polish it"
 VR = bilbil "polish"

Future

1 sg	ȝilabilbilnu	1 pl	ȝilabilbilnu
2 sg	tȝilabilbilnu	2 pl	nilabilbilnu
3 sg	pilabilbilnu	3 pl	pilabilbilnu

Perfect

1 sg	ȝilamilbil [*]	1 pl	ȝilamilbil
2 sg	tȝilamilbil	2 pl	nilamilbil
3 sg	dilamilbil	3 pl	pilamilbil

Imperfect

1 sg	ȝila(ȝa)bilbilda	1 pl	ȝila(ȝa)bilbilda
2 sg	tȝila(ȝa)bilbilda	2 pl	nila(ȝa)bilbilda
3 sg	dila(ȝa)bilbilda	3 pl	pila(ȝa)bilbilda

Past Negative

1 sg	ȝilaȝibilbilda	1 pl	ȝilaȝibilbilda
2 sg	tȝilaȝibilbilda	2 pl	nilaȝibilbilda
3 sg	dilaȝibilbilda	3 pl	pilaȝibilbilda

* This form comes from *ȝilam + bilbil which becomes
 *ȝilam + milbil MP-7
 ȝilamilbil MP-11

cf. ȝilamȝebilbil "I polished it for her".

IV. Principal Parts of nuḍuyetYitYnu "I will teach him"
VR = yetYitY "teach"

Future

1 sg	nuḍuyetYitYnu	1 pl	nuḍuyetYitYnu
2 sg	tuḍuyetYitYnu	2 pl	nuḍuyetYitYnu
3 sg	puḍuyetYitYnu	3 pl	puḍuyetYitYnu

Perfect

1 sg	nuḍanYtYetYitY*	1 pl	nuḍanYtYetYitY
2 sg	tuḍanYtYetYitY	2 pl	nuḍanYtYetYitY
3 sg	wuḍanYtYetYitY	3 pl	puḍanYtYetYitY

Imperfect

1 sg	nuḍiniyetYitYda	1 pl	nuḍiniyetYitYda
2 sg	tuḍiniyetYitYda	2 pl	nuḍiniyetYitYda
3 sg	wuḍiniyetYitYda	3 pl	puḍiniyetYitYda

Past Negative

1 sg	nuḍiyetYitYda	1 pl	nuḍiyetYitYda
2 sg	tuḍiyetYitYda	2 pl	nuḍiyetYitYda
3 sg	wuḍiyetYitYda	3 pl	puḍiyetYitYda

* This comes from *nuḍam + yetYitY which becomes
nuḍanYtYetYitY MP-2

ie. the y of the verb stem is y₁

cf. nuḍamnYiyetYitY "I taught you"

V. Principal Parts for $\eta\text{ina}\eta\text{kayyeyt}\nu$ "I will punish him"

VR = $\eta\text{kayyeyt}\nu$ "punish"

Future

1 sg	$\eta\text{ina}\eta\text{kayyeyt}\nu$	1 pl	$\eta\text{ina}\eta\text{kayyeyt}\nu$
2 sg	$t\eta\text{ina}\eta\text{kayyeyt}\nu$	2 pl	$n\text{ina}\eta\text{kayyeyt}\nu$
3 sg	$p\text{ina}\eta\text{kayyeyt}\nu$	3 pl	$p\text{ina}\eta\text{kayyeyt}\nu$

Perfect

1 sg	$\eta\text{ina}\eta\text{amkayyeyt}\nu^*$	1 pl	$\eta\text{ina}\eta\text{amkayyeyt}\nu$
2 sg	$t\eta\text{ina}\eta\text{amkayyeyt}\nu$	2 pl	$n\text{ina}\eta\text{amkayyeyt}\nu$
3 sg	$n\eta\text{amkayyeyt}\nu$	3 pl	$p\text{ina}\eta\text{amkayyeyt}\nu$

Imperfect

1 sg	$\eta\text{ina}\eta\eta\text{kayyeyt}\nu\text{da}$	1 pl	$\eta\text{ina}\eta\eta\text{kayyeyt}\nu\text{da}$
2 sg	$t\eta\text{ina}\eta\eta\text{kayyeyt}\nu\text{da}$	2 pl	$n\text{ina}\eta\eta\text{kayyeyt}\nu\text{da}$
3 sg	$n\text{ina}\eta\eta\text{kayyeyt}\nu\text{da}$	3 pl	$p\text{ina}\eta\eta\text{kayyeyt}\nu\text{da}$

Past Negative

1 sg	$\eta\text{ina}\eta\text{in}\text{kayyeyt}\nu\text{da}$	1 pl	$\eta\text{ina}\eta\text{in}\text{kayyeyt}\nu\text{da}$
2 sg	$t\eta\text{ina}\eta\text{in}\text{kayyeyt}\nu\text{da}$	2 pl	$n\text{ina}\eta\text{in}\text{kayyeyt}\nu\text{da}$
3 sg	$n\text{ina}\eta\text{in}\text{kayyeyt}\nu\text{da}$	3 pl	$p\text{ina}\eta\text{in}\text{kayyeyt}\nu\text{da}$

* Unacceptable three member cluster $^*\text{m}\eta\text{k}$ is reduced to mk by deleting the second segment.

VI. Principal Parts of 𐎧𐎢𐎡𐎠𐎢𐎠 "I will pull it"
 VR = 𐎢𐎠 "pull"

Future

1 sg	𐎧𐎢𐎡𐎠𐎢𐎠	1 pl	𐎧𐎢𐎡𐎠𐎢𐎠
2 sg	𐎧𐎢𐎡𐎠𐎢𐎠	2 pl	𐎧𐎢𐎡𐎠𐎢𐎠
3 sg	𐎧𐎢𐎡𐎠𐎢𐎠	3 pl	𐎧𐎢𐎡𐎠𐎢𐎠

Perfect

1 sg	𐎧𐎢𐎡𐎠𐎢𐎠*	1 pl	𐎧𐎢𐎡𐎠𐎢𐎠
2 sg	𐎧𐎢𐎡𐎠𐎢𐎠	2 pl	𐎧𐎢𐎡𐎠𐎢𐎠
3 sg	𐎧𐎢𐎡𐎠𐎢𐎠	3 pl	𐎧𐎢𐎡𐎠𐎢𐎠

Imperfect

None attested.

Past Negative

1 sg	𐎧𐎢𐎡𐎠𐎢𐎠	1 pl	𐎧𐎢𐎡𐎠𐎢𐎠
2 sg	𐎧𐎢𐎡𐎠𐎢𐎠	2 pl	𐎧𐎢𐎡𐎠𐎢𐎠
3 sg	𐎧𐎢𐎡𐎠𐎢𐎠	3 pl	𐎧𐎢𐎡𐎠𐎢𐎠

*This form arises from *𐎧𐎢𐎡𐎠 + 𐎢𐎠 which becomes

*𐎧𐎢𐎡𐎠𐎢𐎠	MP-6
𐎧𐎢𐎡𐎠𐎢𐎠	MP-10

VIII. Future Paradigm of "strike"

	<u>Aux Base</u>	<u>Verb Root</u>	<u>NI</u>	<u>Tense Marker</u>
1 sg	ɲu	baɗ		nu
2 sg	tu	baɗ		nu
3 sg	pu	baɗ		nu
1 du inc (SIB)	pu	baɗ		nu
1 du exc MASC	ɲu	baɗ	ninda	nu
1 du exc FEM	ɲu	baɗ	ɲinda	nu
1 du exc SIB	ɲu	baɗ		nu
2 du MASC	nu	baɗ	ninda	nu
2 du FEM	nu	baɗ	ɲinda	nu
2 du SIB	nu	baɗ		nu
3 du MASC	pu	baɗ	ninda	nu
3 du FEM	pu	baɗ	ɲinda	nu
3 du SIB	pu	baɗ		nu
1 pc inc MASC	pu	baɗ	neme	nu
1 pc inc FEM	pu	baɗ	ɲime	nu
1 pc SIB	ɲu	baɗ		nu
1 pc exc MASC	ɲu	baɗ	neme	nu
1 pc exc FEM	ɲu	baɗ	ɲime	nu
2 pc MASC	nu	baɗ	neme	nu
2 pc FEM	nu	baɗ	ɲime	nu
2 pc SIB	nu	baɗ		nu
3 pc MASC	pu	baɗ	neme	nu
3 pc FEM	pu	baɗ	ɲime	nu
3 pc SIB	pu	baɗ		nu
1 pl	ɲu	baɗ		nu
2 pl	nu	baɗ		nu
3 pl	pu	baɗ		nu

VIII. Perfect Paradigm of "strike"

	<u>Aux Base</u>	<u>Verb Root</u>	<u>NI</u>
1 sg	pan	baḍ	
2 sg	tan	baḍ	
3 sg	pan	baḍ	
1 du inc (SIB)	tumban	baḍ	
1 du exc MASC	ḡumban	baḍ	ninda
1 du exc FEM	ḡumban	baḍ	ḡinda
1 du exc SIB	ḡumbanka	baḍ	
2 du MASC	numban	baḍ	ninda
2 du FEM	numban	baḍ	ḡinda
2 du SIB	numbanka	baḍ	
3 du MASC	pumban	baḍ	ninda
3 du FEM	pumban	baḍ	ḡinda
3 du SIB	pumbanka	baḍ	
1 pc inc MASC	tumban	baḍ	neme
1 pc inc FEM	tumban	baḍ	ḡime
1 pc SIB	ḡumban	baḍ	
1 pc exc MASC	ḡumbanka	baḍ	neme
1 pc exc FEM	ḡumbanka	baḍ	ḡime
2 pc MASC	numbanka	baḍ	neme
2 pc FEM	numbanka	baḍ	ḡime
2 pc SIB	numban	baḍ	
3 pc MASC	pumbanka	baḍ	neme
3 pc FEM	pumbanka	baḍ	ḡime
3 pc SIB	pumban	baḍ	
1 pl	ḡumban	baḍ	
2 pl	numban	baḍ	
3 pl	pumban	baḍ	

Note: ka in the Aux Base is optionally deleted when there is an overt direct object following it.

VIII. Imperfect Paradigm of "strike"

	<u>Aux Base</u>	<u>Verb Root</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ɲuni	tuk	da	
2 sg	tuni	tuk	da	
3 sg	puni	tuk	da	
1 du inc (SIB)	tuni	tuk	da	
1 du exc MASC	ɲuni	tuk	da	ninda
1 du exc FEM	ɲuni	tuk	da	ɲinda
1 du exc SIB	ɲuni	tuk	da	
2 du MASC	tuni	tuk	da	ninda
2 du FEM	tuni	tuk	da	ɲinda
2 du SIB	nuni	tuk	da	
3 du MASC	puni	tuk	da	ninda
3 du FEM	puni	tuk	da	ɲinda
3 du SIB	puni	tuk	da	
1 pc inc MASC	tuni	tuk	da	neme
1 pc inc FEM	tuni	tuk	da	ɲime
1 pc SIB	ɲuni	tuk	da	
1 pc exc MASC	ɲuni	tuk	da	neme
1 pc exc FEM	ɲuni	tuk	da	ɲime
2 pc MASC	nuni	tuk	da	neme
2 pc FEM	nuni	tuk	da	ɲime
2 pc SIB	nuni	tuk	da	
3 pc MASC	puni	tuk	da	neme
3 pc FEM	puni	tuk	da	ɲime
3 pc SIB	puni	tuk	da	
1 pl	ɲuni	tuk	da	
2 pl	nuni	tuk	da	
3 pl	puni	tuk	da	

Note: Each form suffixes the appropriate form of SIT eg.

1 pc exc MASC ɲunitukdaneməɲine

Imperfect forms with verb root baɖ do not occur,
suppletive forms in tuk are used.

VIII. Past Negative Paradigm of "strike"

	<u>Aux Base</u>	<u>Verb Root</u>	<u>Tense Marker</u>	<u>NI</u>
1 sg	ɲuyi	baɖ	da	
2 sg	tuyi	baɖ	da	
3 sg	puyi	baɖ	da	
1 du inc (SIB)	tuyi	baɖ	da	
1 du exc MASC	ɲuyi	baɖ	da	ninda
1 du exc FEM	ɲuyi	baɖ	da	ɲinda
1 du exc SIB	ɲuyi	baɖ	da	
2 du MASC	tuyi	baɖ	da	ninda
2 du FEM	tuyi	baɖ	da	ɲinda
2 du SIB	nuyi	baɖ	da	
3 du MASC	puyi	baɖ	da	ninda
3 du FEM	puyi	baɖ	da	ɲinda
3 du SIB	puyi	baɖ	da	
1 pc inc MASC	tuyi	baɖ	da	neme
1 pc inc FEM	tuyi	baɖ	da	ɲime
1 pc SIB	ɲuyi	baɖ	da	
1 pc exc MASC	ɲuyi	baɖ	da	neme
1 pc exc FEM	ɲuyi	baɖ	da	ɲime
2 pc MASC	nuyi	baɖ	da	neme
2 pc FEM	nuyi	baɖ	da	ɲime
2 pc SIB	nuyi	baɖ	da	
3 pc MASC	puyi	baɖ	da	neme
3 pc FEM	puyi	baɖ	da	ɲime
3 pc SIB	puyi	baɖ	da	
1 pl	ɲuyi	baɖ	da	
2 pl	nuyi	baɖ	da	
3 pl	puyi	baɖ	da	

IX. Future Paradigm of "hammer, hit often"

VR = ɖeɖe "hit often"

1 sg	paɖeɖenuŋi
2 sg	taɖeɖenuɥi
3 sg	paɖeɖenuɸi
1 du inc (SIB)	pubaɖeɖenuɸi
1 du exc MASC	panindaɖeɖenuŋi
1 du exc FEM	paŋindaɖeɖenuŋi
1 du exc SIB	ɣubaɖeɖenuŋe
2 du MASC	tanindaɖeɖenuɥi
2 du FEM	taŋindaɖeɖenuɥi
2 du SIB	nubaɖeɖenune
3 du MASC	panindaɖeɖenuɸi
3 du FEM	paŋindaɖeɖenuɸi
3 du SIB	pubaɖeɖenupe
1 pc inc MASC	pubaɖeɖenunemepi
1 pc inc FEM	pubaɖeɖenuŋimepi
1 pc SIB	ɣubaɖeɖenuŋuyu
1 pc exc MASC	ɣubaɖeɖenunemeŋe
1 pc exc FEM	ɣubaɖeɖenuŋimeŋe
2 pc MASC	nubaɖeɖenunemene
2 pc FEM	nubaɖeɖenuŋimene
2 pc SIB	nubaɖeɖenunuyu
3 pc MASC	pubaɖeɖenunemepe
3 pc FEM	pubaɖeɖenuŋimepe
3 pc SIB	pubaɖeɖenupuyu
1 pl	ɣubaɖeɖenuŋuyu
2 pl	nubaɖeɖenunuyu
3 pl	pubaɖeɖenupuyu

Note: Each form has a SIT suffix.

IX. Perfect Paradigm of "hammer, hit often"

1 sg	baŋaŋɛɛɛɛɛɛ*
2 sg	daŋaŋɛɛɛɛɛɛɛɛɛ
3 sg	baŋaŋɛɛɛɛɛɛɛ
1 du inc (SIB)	tubaŋaŋɛɛɛɛɛɛɛɛɛ
1 du exc MASC	baŋaŋ(n)indaɛɛɛɛɛɛɛ
1 du exc FEM	baŋaŋɛindaɛɛɛɛɛɛɛ
1 du exc SIB	ɲubaŋamkaɛɛɛɛɛɛɛɛɛ
2 du MASC	daŋaŋ(n)indaɛɛɛɛɛɛɛɛɛ
2 du FEM	daŋaŋɛindaɛɛɛɛɛɛɛɛɛ
2 du SIB	nubaŋamkaɛɛɛɛɛɛɛɛɛɛ
3 du MASC	baŋaŋ(n)indaɛɛɛɛɛɛɛ
3 du FEM	baŋaŋɛindaɛɛɛɛɛɛɛ
3 du SIB	pubaŋamkaɛɛɛɛɛɛɛɛɛɛ
1 pc inc MASC	tubaŋaŋɛɛɛɛɛɛɛɛɛɛɛɛɛ
1 pc inc FEM	tubaŋaŋɛɛɛɛɛɛɛɛɛɛɛ
1 pc SIB	ɲubaŋaŋɛɛɛɛɛɛɛ
1 pc exc MASC	ɲubaŋamkaɛɛɛɛɛɛɛɛɛɛɛɛɛ
1 pc exc FEM	ɲubaŋamkaɛɛɛɛɛɛɛɛɛɛɛɛɛ
2 pc MASC	nubaŋamkaɛɛɛɛɛɛɛɛɛɛɛɛɛ
2 pc FEM	nubaŋamkaɛɛɛɛɛɛɛɛɛɛɛɛɛ
2 pc SIB	nubaŋaŋɛɛɛɛɛɛɛ
3 pc MASC	pubaŋamkaɛɛɛɛɛɛɛɛɛɛɛɛɛ
3 pc FEM	pubaŋamkaɛɛɛɛɛɛɛɛɛɛɛɛɛ
3 pc SIB	pubaŋaŋɛɛɛɛɛɛɛ
1 pl	ɲubaŋaŋɛɛɛɛɛɛɛɛɛ
2 pl	nubaŋaŋɛɛɛɛɛɛɛɛɛ
3 pl	pubaŋaŋɛɛɛɛɛɛɛɛɛ

*Presumably arises from *baŋaŋ + ɛɛɛɛ by MP-9. However the 1 du exc SIB form suggests there is an underlying /m/ which is assimilated to /n/ by a following apical ie. MP-6 would have to be altered to allow $m \rightarrow n / __ + ɛ$ under certain conditions. The adoption of such a rule awaits further evidence.

IX. Imperfect Paradigm of "hammer, hit often"

1 sg	bedededa*
2 sg	dedededa
3 sg	bedededa
1 du inc (SIB)	tubedededa
1 du exc MASC	benindadededa
1 du exc FEM	benindadededa
1 du exc SIB	nubedededa
2 du MASC	denindadededa
2 du FEM	denindadededa
2 du SIB	nubedededa
3 du MASC	benindadededa
3 du FEM	benindadededa
3 du SIB	pubedededa
1 pc inc MASC	tubedededaneme
1 pc inc FEM	tubedededanime
1 pc SIB	nubedededa
1 pc exc MASC	nubedededaneme
1 pc exc FEM	nubedededanime
2 pc MASC	nubedededaneme
2 pc FEM	nubedededanime
2 pc SIB	nubedededa
3 pc MASC	pubedededaneme
3 pc FEM	pubedededanime
3 pc SIB	pubedededa
1 pl	nubedededa
2 pl	nubedededa
3 pl	pubedededa

Past Negative is the same.

*These forms also appear with the SIT suffix.

X. Principal parts of paŋkaḍunu "I will see"
 VR = ŋkaḍu "see"

Future

1 sg	paŋkaḍunu	1 pl	ŋubaŋkaḍunu
2 sg	taŋkaḍunu	2 pl	nubaŋkaḍunu
3 sg	paŋkaḍunu	3 pl	pubaŋkaḍunu

Perfect

1 sg	pamkaḍu	1 pl	ŋubamkaḍu
2 sg	damkaḍu	2 pl	nubamkaḍu
3 sg	pamkaḍu	3 pl	pubamkaḍu

Imperfect

1 sg	beŋkaḍuda	1 pl	ŋubeŋkaḍuda
2 sg	deŋkaḍuda	2 pl	nubeŋkaḍuda
3 sg	beŋkaḍuda	3 pl	pubeŋkaḍuda

Past Negative = Imperfect

* Illicit three member cluster *mŋk is reduced to mk .

Note that initial p of future and perfect 1sg is voiced when it takes on the plural prefixes.

XI. Principal Parts of "place upright"

VR = pak "place upright (as, stand a box on its end)"

Future

1 sg	bupaknu	1 pl	ḡubapaknu
2 sg	dupaknu	2 pl	nubapaḡnu
3 sg	bupaknu	3 pl	pubupaknu

Perfect

1 sg	banpak	1 pl	ḡubanpak
2 sg	danpak	2 pl	nubanpak
3 sg	banpak	3 pl	pubanpak

Imperfect - not attested.

Past Negative

1 sg	buyipakda	1 pl	ḡubuyipakda
2 sg	duyipakda	2 pl	nubuyipakda
3 sg	buyipakda	3 pl	pubuyipakda

XII. Principal Parts of "break with one's hands"

VR = pa| "break"

Future

1 sg	mupa nu	1 pl	ɣumupa nu
2 sg	nupa nu	2 pl	numupa nu
3 sg	mupa nu	3 pl	pumupa nu

Perfect

1 sg	muŋampa	1 pl	ɣumuŋampa
2 sg	nuŋampa	2 pl	numuŋampa
3 sg	muŋampa	3 pl	pumuŋampa

Imperfect - not attested.

Past Negative

1 sg	muyipa da	1 pl	ɣumuyipa da
2 sg	nuyipa da	2 pl	numuyipa da
3 sg	muyipa da	3 pl	pumuyipa da

XIII. Principal Parts of "wash"

VR = pu| "wash"

Future

1 sg	mapu nu	1 pl	numapu nu
2 sg	napu nu	2 pl	numapu nu
3 sg	mapu nu	3 pl	pumapu nu

Perfect

1 sg	mampu	1 pl	numampu
2 sg	nampu	2 pl	numampu
3 sg	mampu	3 pl	pumampu

Imperfect

1 sg	mepu da	1 pl	numepu da
2 sg	nepu da	2 pl	numepu da
3 sg	mepu da	3 pl	pumepu da

Past Negative = Imperfect.

APPENDIX 3

Reflexive and Reciprocal Paradigms for "Transitive-type"
Auxiliaries.

Reflexive Paradigms for conjugation I

Principal Parts of newinYiguunu "I will lie on my side"

VR = winYiguu

Future

1 sg	newinYiguunu	1 pl	newinYiguunu
2 sg	tYewinYiguunu	2 pl	newinYiguunu
3 sg	pewinYiguunu	3 pl	pewinYiguunu

Perfect

1 sg	gempinYiguu	1 pl	geJampinYiguu
2 sg	tYempinYiguu	2 pl	neJampinYiguu
3 sg	dempinYiguu	3 pl	peJampinYiguu

Imperfect

1 sg	nenawinYiguuda	1 pl	neJanawinYiguuda
2 sg	tYenawinYiguuda	2 pl	neJanawinYiguuda
3 sg	demawinYiguuda	3 pl	peJanawinYiguuda

Past Negative = Imperfect

Reciprocals are the same except that an element nu appears immediately before the verb root:

penumudmudnu "We two inclusive will mutually give [presents]".

VR = mudmud "exchange [presents]"

II Reflexive and Reciprocal

Principal Parts of ɲiɭanumabaydʲnuɲi "I shall look at my own hand"

VR = baydʲ "look" plus incorporated body part,
ma, "hand" and SIT suffix.

Future

1 sg	ɲiɭanumabaydʲnuɲi	1 pl	ɲiɭanumabaydʲnuɲuyu
2 sg	tʲiɭanumabaydʲnuɲʲi	2 pl	nɪɭanumabaydʲnuɲuyu
3 sg	piɭanumabaydʲnupi	3 pl	piɭanumabaydʲnupuyu

Perfect

1 sg	ɲiɭimnumabaydʲɲem	1 pl	ɲimnumabaydʲɲaɭim
2 sg	tʲiɭimnumabaydʲtʲim	2 pl	nimnumabaydʲniɭim
3 sg	diɭimnumabaydʲɟim	3 pl	pimnumabaydʲpiɭim

Imperfect

1 sg	ɲiɭinumabaydʲdaɲini	1 pl	ɲinumabaydʲdaɲaɭini
2 sg	tʲiɭinumabaydʲdatʲini	2 pl	ninumabaydʲdaniɭini
3 sg	diɭinumabaydʲdaɟini	3 pl	pinumabaydʲdapiɭini

Past Negative same as Imperfect but without the SIT suffix.

III Reflexive and Reciprocal

Principal Parts of *ḡilinumatumnu* "I will dry my own hands"

VR = *tum* "dry" cf *ḡilatunnu* "I will dry it"

Here the incorporated body part, *ma*, "hand" appears with the verb root.

Future

1 sg	<i>ḡilinumatumnu</i>	1 pl	<i>ḡilinumatumnu</i>
2 sg	<i>tʸilinumatumnu</i>	2 pl	<i>nilinumatumnu</i>
3 sg	<i>ḡilinumatumnu</i>	3 pl	<i>ḡilinumatumnu</i>

Perfect*

1 sg	<i>ḡilinumatum</i>	1 pl	<i>ḡilinumatum</i>
2 sg	<i>tʸilinumatum</i>	2 pl	<i>nilinumatum</i>
3 sg	<i>ḡilinumatum</i>	3 pl	<i>ḡilinumatum</i>

Imperfect (with STAND suffix)

1 sg	<i>ḡilinumatumdanī</i>	1 pl	<i>ḡilinuṭnatumdanī</i>
2 sg	<i>tʸilinumatumdatʸī</i>	2 pl	<i>nilinumatumdani</i>
3 sg	<i>ḡilinumatumdapi</i>	3 pl	<i>ḡilinumatumdapi</i>

Past Negative same as the Imperfect without the STAND suffix.

*The only example in the corpus of perfect forms without *m/n*.

The expected *m* has not been elided because of *ma* cf.

ḡilinuṭarmutum "I will dry my own lower leg".

IV Reflexive and Reciprocal.

The only difference occurs in the Future forms where the final u of the Aux base becomes i in the Reflexive and reciprocal forms. nu does not appear.

An example of a reflexive form is:

puḍiḡkabilnu "I will awaken"

VR = ḡkabil which very likely can diachronically be analysed as ḡka "eye, face" plus bil "? open". Synchronically the form is frozen but behaves like a reflexive.

An example of the reciprocal form is

puḍiyetʸitʸnu "We two inclusive will teach each other"

V Reflexive and Reciprocal

Principal Parts of *ɲininuɲedanu* "I will punish myself"VR = *ɲeda* "punish"*

Future

1 sg	<i>ɲininuɲedanu</i>	1 pl	<i>ɲininuɲedanu</i>
2 sg	<i>tʲininuɲedanu</i>	2 pl	<i>nininuɲedanu</i>
3 sg	<i>pininuɲedanu</i>	3 pl	<i>pininuɲedanu</i>

Perfect

1 sg	<i>ɲinumnuɲeda</i>	1 pl	<i>ɲinumnuɲeda</i>
2 sg	<i>tʲinumnuɲeda</i>	2 pl	<i>ninumnuɲeda</i>
3 sg	<i>niɲamnuɲeda (!)</i>	3 pl	<i>pinumnuɲeda</i>

Imperfect (plus SIT suffix)

1 sg	<i>ɲininuɲedadaɲini</i>	1 pl	<i>ɲininuɲedadaɲini</i>
2 sg	<i>tʲininuɲedadatʲini</i>	2 pl	<i>nininuɲedadaniɲini</i>
3 sg	<i>ɖininuɲedadaɖini</i>	3 pl	<i>pininuɲedadapiɲini</i>

Past Negative

1 sg	<i>ɲininuɲedada</i>	1 pl	<i>ɲininuɲedada</i>
2 sg	<i>tʲininuɲedada</i>	2 pl	<i>nininuɲedada</i>
3 sg	<i>nininuɲedada (?)</i> (needs checking)	3 pl	<i>pininuɲedada</i>

* An instance of the suppletion which is common in reflexive and reciprocals: *ɲkayyeytʲ* "punish" cannot be used reflexively or reciprocally while *ɲeda* "punish" can only be used reflexively or reciprocally.

VI Reflexive and Reciprocal

Exactly the same as the non-reflexive paradigms but with
nu immediately following the Aux base eg:

nuḡunuyejurnu "I will pull my own ear"

VII Not yet elicited

VIII Reflexive

Principal Parts of ḡuyiwelernu "I will hit my own head often"

VR = weler "hit head often, repeatedly" (we is a frozen
incorporated body part "head"). Native speakers found
ḡuyibaḡnu "I will hit myself" marginal so a different
verb root is used here to illustrate the forms:

Future (plus SIT suffix)

1 sg	ḡuyiwelernuḡi	1 pl	ḡuyiwelernuḡuyu
2 sg	tuyiwelernutʸi	2 pl	nuyiwelernunuyu
3 sg	puyiwelernupi	3 pl	puyiwelernupuyu

Perfect (plus SIT suffix)

1 sg	ḡampelerḡem	1 pl	ḡuyiyempelerḡaḡim
2 sg	tampelertʸim	2 pl	nuyiyempelerḡiḡim
3 sg	pampelerḡim	3 pl	puyiyempelerpirim

Imperfect (plus SIT suffix)

1 sg	ḡanawelerdaḡini	1 pl	ḡuyiyenawelerdaḡaḡini
2 sg	tanawelerdatʸini	2 pl	nuyiyenawelerdaniḡini
3 sg	panawelerdaḡini	3 pl	puyiyenawelerdapiḡini

Past Negative same as Imperfect but without SIT suffix.

Reciprocal. The same as the reflexive except that yi does not
appear in the Aux base in the future forms and nu is optionally
inserted immediately after the Aux base eg. pu(nu)welernupi
"We two inclusive will hit each other's heads often"

IX Reflexive and Reciprocal

Principal Parts of bewelernunani "I will hit my own head often"

VR = weler (note that this verb root also selects VIII)

Future, Perfect and Imperfect appear with HAB or STAND suffix

(HAB is given in the examples); there is a split opinion

on whether any auxiliary suffix is acceptable on the Past Negative.

Future

1 sg	pewelernunani	1 pl	ḡubewelernunani
2 sg	tʷewelernutani	2 pl	nubewelernunani
3 sg	pewelernupani	3 pl	pubewelernupani

Perfect

1 sg	bempelerḡanam	1 pl	ḡubempelerḡanam
2 sg	dempelertanam	2 pl	nubempelerḡanam
3 sg	bempelerkanam	3 pl	pubempelerpanam

Imperfect

1 sg	benawelerdaḡaḡi	1 pl	ḡubenawelerdaḡaḡi
2 sg	denawelerdataḡi	2 pl	nubenawelerdaḡaḡi
3 sg	benawelerdakaḡi	3 pl	pubenawelerdapaḡi

Past Negative

1 sg	benawelerda(ḡaḡi)	1 pl	ḡubenawelerda(ḡaḡi)
2 sg	denawelerda(taḡi)	2 pl	nubenawelerda(ḡaḡi)
3 sg	benawelerda(kaḡi)	3 pl	pubenawelerda(paḡi)

nu is optionally inserted, immediately after the Aux base:

bemnuwelerḡanam "I hit my (own) head often"

X Reflexive and Reciprocal

Principal Parts of benumaŋkaḍunu "I will look at my own hand; I will look at it in my own hand"

VR = ŋkaḍu "look at, see" with incorporated body part, ma "hand". Note that nu is obligatory after the Aux base for this conjugation.

Future

1 sg	penumaŋkaḍunu	1 pl	ŋubenumaŋkaḍunu
2 sg	tʸenumaŋkaḍunu	2 pl	nubenumaŋkaḍunu
3 sg	penumaŋkaḍunu	3 pl	pubenumaŋkaḍunu

Perfect

1 sg	pemnumaŋkaḍu	1 pl	ŋubemnumaŋkaḍu
2 sg	demnumaŋkaḍu	2 pl	nubemnumaŋkaḍu
3 sg	pemnumaŋkaḍu	3 pl	pubemnumaŋkaḍu

Imperfect (with SIT suffix)

1 sg	benumaŋkaḍudaŋini	1 pl	ŋubenumaŋkaḍudaŋaɹini
2 sg	denumaŋkaḍudaɸini	2 pl	nubenumaŋkaḍudaɸini
3 sg	benumaŋkaḍudaḍini	3 pl	pubenumaŋkaḍudaɸini

Past Negative = Imperfect without SIT suffix.

Note that there could be any other body part incorporated:

ŋubenutarmuŋkaḍudaŋaɹini "We all looked at our own lower legs;
we all looked at each other's lower legs".

XI and XII have not been able to be elicited as yet.

XIII Reflexive and Reciprocal.

Principal Parts of mepu|nu "I will wash myself"

VR = pu| "wash"

Future

1 sg	mepu nu	1 pl	numepu nu
2 sg	nepu nu	2 pl	numepu nu
3 sg	mepu nu	3 pl	pumepu nu

Perfect

1 sg	mempu	1 pl	numempu
2 sg	nempu	2 pl	numempu
3 sg	mempu	3 pl	pumempu

Imperfect

1 sg	menapu da	1 pl	numenapu da
2 sg	nenapu da	2 pl	numenapu da
3 sg	memapu da	3 pl	pumenapu da

Appendix 4. Texts

1. Nugeman^y told by Harry Kulambuut (palada)
2. Nuwit^y told by Irene Kulambuut (nadpuk)
3. Tyandu told by Harry Kulambuut (palada)

Each Musinypata sentence is numbered with an interlinear morphemic gloss and a free English translation. Where appropriate background, and linguistic explanation are provided.

1. Nugeman^y.

This story deals with an exploit of the mythological entity,
Nugeman^y, the Man in the Moon.

- 1 muɔin^y kan^{yi} ɲu-ɖit-nu-ka
story this 1sg VIII-narrate-FUT-TOPIC
I'm going to tell this story now.

- 2 muɔin^y mundak ɖa ɲata
story old place this
[It's] an old story of this place.

- 3 muɔin^y muɔin^y kaɖu mamayyi pune-
story story NC:person child [a slip of the tongue]
nugeman^y kaɖu mamayyi mam-wunku-kaɖap-ɲinda
Nugeman^y NC:person child 3sg XIII PERF-3 du-deprive of-du FEM
[It's] a story of how Nugeman^y stole a child from its parents.

This sentence is more literally translated as:

[It's] a story of (about) a child and Nugeman^y, a child
[whom] he (Nugeman^y) stole from his parents.

ie. there is a matrix sentence muɔin^y kaɖu mamayyi nugeman^y
to which is adjoined a relative clause with mamayyi as
antecedent. Repetition is common in Muɔinypata narrative.

- 4 kan^yd^yin-ø-maḍawit^y ɲaɹa merk paŋu
 3 sg HAVE PERF-3 sg-take LOC moon there
 He (Nugeman^y) took him up to the moon.

- 5 ɲara tʲitayyi ɖini-maḍaŋn^yuŋ-da-kaḍi
 LOC sugarbag (generic) 3 sg SIT-look sugarbag-IMPERF-3 sg HAB
 He was looking for sugarbag.

We would expect ɖinimaḍaŋn^yuŋdakaḍi tʲitayyin^y. This is an elliptical version of ɖinimaḍaŋn^yuŋdakaḍi ɲaɹa ɖa tʲitayyi
 He was looking for sugarbag at a sugarbag place.

- 6 yilamina kalekale pumbanka-ḍur-ŋime
 father mother-REDUP 3 pc MOVE PERF-go to hunt-3 pc FEM
 The father and mother and child went along.

⁶ is an elliptical version of yilamina(yi) kalekale(yi) mamayyi pumbankaḍurŋime. If The father and mother went along had been meant the dual feminine subject would have been cross-referenced into the auxiliary as wuɹaŋḍurŋinda. The verb root ḍur indicates go with a specific purpose in mind in this case, looking for food.

- 7 pumbankaḍurŋime
 They went (for food).

Repeats ⁶.

- 8 ku tʔitayyi ŋaɟa pune-ŋime
 NC:meat sugarbag (generic) LOC 3 pc USING FOOT-pc FEM
 They were heading for sugarbag [place].

The imperfect aspect marker, da, has been deleted.

- 9 punenime
 Repetition of the verb of ⁸.

- 10 beɟe
 finished

This interjection [3.5] frequently appears in narrative and is rather difficult to gloss. It may be used to mark a shift in the narrative: for example, the introduction of a new character but frequently just indicates a pause in the discourse. It will be glossed 'finished', following the native speaker practice.

- 11 yilamina-ka ku tʔitayyi pam-ŋkaɟu-
 father-TOPIC NC:meat sugarbag 3sg X PERF-see-
 wuɟan
 3sg INVISIBLE TO SPEAKER MOVE PERF
 [Now] his father saw sugarbag as he went along.

- 12 beɟe
 finished.

13 punenime

They were going along.

14 ba

excuse me!

The narrator apologises for not continuing on telling what the father was doing. This is revealed in the next sentence.

15 pam-ŋkaŋkaŋ waɖa ku yuwu

3 sg I PERF-chop (down) now NC:meat indeed

Now he started chopping [a tree for] sugarbag.

Note the inceptive use of waɖa [4.3.10]. The dative inflection -nu on ku has been deleted because the context is clear.

16 paŋkaŋkaŋ pam-bat tayi yuwu

3 sg XI PERF-fall tree indeed

He chopped [it] down [and] the tree fell.

We would expect *pamkaŋkaŋ to result from the reduction of the illicit three-member cluster *mŋk (cf. *pamŋkaɖu He saw it becomes pamkaɖu). Note that *pambat becomes pamat [2.1.10.17].

17 beje

finished

18 pan-yejaɾ

3 sg VIII PERF-chop up

He chopped it up.

The narrator gave this form as panʏtʏeJar invoking MP-2
[2.1.10.17] but then intended to repeat the form according
to typical Muɔinypata narrative style but gave:

19 *panʏeJar

ie. invoking MP-4 but immediately corrected himself:

20 wuda

no!

It seems the morphophonemics are tricky even for native speakers!

21 panʏtʏeJar

He chopped it up

22 beJe

[finished]

23 pumbanka-pak-ŋime

3 pc VIII PERF-pick up-pc FEM

They (the father, the mother and the child) picked it up.

24 pumbankapakŋime ŋaJa we

3 pc VIII PERF-pick up-pc FEM LOC paperbark

They picked it up in [some] paperbark.

25 plɔimka-mut-ŋime

3 pc STAND-eat-pc fem

They ate [it] while standing.

The expected form is, of course, pibimkamutɲime but the narrator said he used this form as well although the other was 'more correct'.

26 beje
finished

27 yilamina kalekale
father mother
wuɬan-ɲinda-ɖur waɖa
3 du INVISIBLE TO SPEAKER MOVE PERF-du FEM-go to hunt now
ku
NC:meat

The father and mother started to go (for sugarbag).

The dative inflection on ku has been omitted.

28 diɬa-ɲinda-winayt ɖiyiɖa
3 du II-du FEM-look for again
They were looking for [it viz. sugarbag] again.

The imperfect aspect marker, da, has been deleted. On the tape diɬa- is rather indistinct.

29 wuɬini
They were going.

30 wuɬini
They were going.

29 and 30 are elliptical forms for wuɪnidaŋinda.

31 kaɪkata

They (two) looked up.

This is completely mystifying. Native speakers have provided the gloss given but no amount of questioning has yet shown the morphological composition of this form (see also 36).

32 ma

oh

33 nukunu-ka mamayyi nʸini-ka

3 sg MASC-TOPIC child this (near)-TOPIC

ŋaŋga ɖa tuŋu ɖini-da

that (near) place behind 3 sg SIT-IMPERF

Ah, this child was sitting "behind" that place.

The child is sitting near by but out of the sight and hearing of his parents.

34 ɖini-maɖaŋnʸuŋ-da-kaɖi

3 sg SIT-look sugarbag-IMPERF-3 sg HAB

He was looking for sugarbag.

35 kalekale yileyile beɖeŋata wuɪni-ŋinda

mother father still 3 du MOVE-du FEM

[His] mother and father were still going along.

36 wuɪniŋinda kaɪkata

They were still going along, looking up.

37 wakal-ka nanga da wagu dinimaɗan^yuntakaɗi

child-TOPIC that (near) place (away) from

The child was looking for sugarbag away from that place
(where his parents were).

38 n^yini-ka nugeman^y waɗa kaɗu wudam-

this (near)-TOPIC Nugeman^y now NC:person 3 sg IV PERF-

na-ɗuɗ naja merk ɗa katu

3 sg MASC BEN-come down LOC moon place towards

Now this man, Nugeman^y, came down from the moon for him.

39 wuɗamnaɗut nanga ɗa

He came down to that place for him (the child).

In full this sentence would be: nugeman^y wuɗamnaɗut

kaɗu mamayyinu naja nanga ɗa

40 nukunu-ka mamayyi n^yini-ka kangal

3 sg MASC-TOPIC child this (near)-TOPIC above

mam-ka

3 sg SAY/DO PERF-TOPIC

This child [looked up and] said.

This was said by native speakers to be short for:

mamayyi n^yinika pamkaɗuwuɗan kangal(yi) mam

This child looked up (as he went) and said.

41 kangal mamka

He [looked up and] said.

42 mamka

He said:

43 kaḍu batʸu kayyu kayyu numi kaḍu
 NC:person different/foreign this this one NC:person
 nugemanʸ-wa kanʸi yuwu
 Nugemanʸ-EMPH this (hear) indeed
 "This strange man, this one, this is indeed Nugemanʸ."

A non-verbal sentence with three NPs in opposition.

44 beɬemata
 completely finished

45 ma-ŋan-m-ϕ-met nʸini ɖa mata
 3 sg XIII- ?-PERF-3 sg-take this place for good
 nugemanʸ-ɬe
 Nugemanʸ-ERG
 Nugemanʸ took him [from] this place for good

46 kanʸdʸin-ϕ-maḍawitʸ waḍa
 3 sg HAVE PERF-3 sg-take up now
 He (Nugemanʸ) began to take him up.

47 kanʸdʸinmaḍawitʸ
 He took him up.

48 kanʸdʸinmaḍawitʸ merk
 he took him up moon

wada waŋu a: ŋaɟa kaɖu kunugunu ɖa
 now away ah! LOC NC:person old woman place
 He took him away up to the moon now, ah, to the old woman's
 place.

This sentence in non-elliptical form would be: nugeman^yte mamayyi
 kan^yd^yinmaɖawit^y ŋaɟa merk katu wada waŋu a ŋaɟa ɖa kaɖu
 kunugunu katu.

Note especially the deletion of the directional particle, katu
 and the reversed ordering in the possessive phrase.

49 kaɖu mut^yinga dini-da-ya n^yini ɖa
 NC:person old woman 3 sg SIT-IMPERF-DUB this(remote) place
 The old woman was sitting in this place.

The strangeness of the situation in the story is emphasized by
 the dubitative suffix, -ya and the remote demonstrative.

50 ɖim-ŋe-mud
 3 sg SIT PERF-3 sg FEM BEN-give
 He gave him to her.

A good example of a sentence in which all the NPs have been deleted.
 In full, ⁵⁰ would be kaɖu nugeman^yte kaɖu mamayyi ɖimŋemud kaɖu
 mut^yinganu.

51 ba
 excuse me

- 52 muɿinʸ ɲam-yekum-ka
word/story 1 sg I PERF-forget-TOPIC
Sorry, I forget a word/the story.

The storyteller apologises for what he says is a break in the narrative.

- 53 kaɖu ɲugemanʸ kale mam-ɲe-ya
NC:person Nugemanʸ mother 3 sg SAY/DO PERF-3 sg FEM BEN-DUB
Nugemanʸ spoke to his mother.

- 54 nʸini ɖa ɖim-ɲe-mud kale
this (remote) place 3 sg SIT PERF-3 sg FEM BEN-give mother
He gave him (the child) to [his] mother [in] this place.

- 55 na-ɲa-pet-nu-tʸi wakal ɲayi waɖa
2 sg XIII-1 sg BEN-look after-FUT-2 sg SIT child 1 sg now
"Look after my child for me now."

- 56 naɲapetinuʸi
"Look after him for me"

- 57 mam
He said

- 58 beɭe
finished

- 59 ɖa kaɖi-da kaɖu mamayyi nʸini ɖa
place 3 sg HAB-IMPERF NC:person child this (remote) place
ɲaja mɔrk
LOC moon
The child was staying at this place in the moon.

60 ɖaŋata kalekale yileyle-ka ɖaŋata
 all the time mother father-TOPIC all the time
 diɭa-ŋinda-winayt-da-kaɖi
 3 du II-du FEM-look for-IMPERF-3 du HAB
 All the time [his] mother and father kept on looking for [him].

61 ɖaŋata diɭa-ŋinda-winayt-da-piɭi
 all the time 3 du II-du FEM-look for-IMPERF-3 du STAND
 All the time they were looking for [him].

62 ɖaŋata diɭaŋindawinaytdakaɖi
 All the time they kept on looking for [him].

63 nukunu-ka kaɖu nugemanʸ-ka ku
 3 sg MASC-TOPIC NC:person Nugemanʸ-TOPIC NC:meat
 tʸitayyi-nu na-ɖur
 sugarbag (generic)-DAT 3 sg USING FOOT-go to hunt
 He, Nugemanʸ, was going after sugarbag.

64 ku-nu nuɭa-ɖini
 NC:meat-DAT 3 sg ? MOVE-3 sg SIT
 He was going for sugarbag.

nuɭa(da) appears to be interchangeable with nada 3 sg USING FOOT
 IMPERF. This is the only instance of it in the writer's corpus.

65 kaḍu mutYinga nYini-ka ḍini-de

NC:person old woman this-TOPIC 3 sg SIT-IMPERF

waḍa ḍim-ḡinda-maḍam na kaḍu

now 3 du SIT-du FEM-worry isn't that so? NC:person

ḡaḡga nimin

that (near) two

This old woman was sitting [thinking] now [that] those two people must be worried.

Note the special form for two rather than the usual pekengu.

The old woman sits thinking and addresses a polar interrogative to herself! "Those two people are worried now, aren't they?"

66 kaḍi-ḡinda-lili-da pepe

3 du HAB-du FEM-walk-IMPERF below

They kept on walking around below/down there.

67 kaḍiḡindalilida

They kept on walking around

68 beJe

finished

69 mam

3 sg SAY/DO PERF

She said.

70 mam

3 sg SAY/DO PERF

She said.

71 nʔini-ka

this-TOPIC

"This is it."

72 ŋu-ϕ-dutut-nu

waɖa

1 sg VIII-3 sg-send down-FUT now

"I'm going to send him down now."

73

pi

nanʔdʔi

pi

ma-yiʔi-nu

yi

rope/string NC:thing rope 1 sg XIII-make rope-FUT and

ŋudututnu

1 sg VIII-3 sg-send down-FUT

"I'll make a rope and send him down!"

The narrator always described pi as "string" although "rope" is probably a more apt English translation here.

74

pu-didut-nu

3 sg VIII-go down-FUT

"He will go down"

75

beje-wa

finished-EMPH

It's finished.

The VR dutut "send down" from 72 and ditut "go down" are very likely related but this is an isolated phenomenon. There is no productive causative element du in Mulinypata.

- 76 kunugunu n^yini pan-jet waḍa nan^yd^yi-wa
 old woman this 3 sg ? VIII-make now NC:thing-EMPH
 mam-yi pi yuwu
 3 sg SAY/DO PERF-and rope indeed
 This old woman began making the rope, fashioning it with
 her hands.

The y of yi and is assimilated to the preceding nasal to give
 mamn^yi (MP-4).

- 77 ḍaḡata me-yiyi-da-ḍini-ya
 all the time 3 sg XIII-make-rope-IMPERF-3 sg SIT-DUB
 She kept on making rope all the time.

- 78 nukunu mana katu wuḍam-dawul-ka
 3 sg MASC back towards 3 sg IV PERF-cover up-TOPIC
 yi ḡaḡa putek be-bir nan^yd^yi pi
 and LOC ground 3 sg IX-cover NC:thing rope
 When he came back, she covered it up, putting the rope
 in the ground.

The imperfective aspect marker da has been deleted from be bir.

* wuḍamdawulka has the surface form wuḍanawulka. The verb, wuḡan
 "he went" is understood in the first clause.

- 79 nukunu maḍa be-ḡkaḍu nugeman^y yuwu
 3 sg MASC NEG 3 sg X-see Nugeman^y indeed
 Nugeman^y didn't see a thing.

80 d̥ini-ŋinda

3 du SIT-du FEM

They two (the old woman and the child) were sitting down.

81 piɹine-ŋime

3 pc SIT-pc FEM

They few were sitting down.

The old woman and child were sitting down when Nugeman^y came back;
Nugeman^y sat down and then there were three of them sitting down!

yi nugeman^y-ka na-ɖur ku-nu
and Nugeman^y-TOPIC 3 sg USING FOOT-go to hunt NC:meat-DAT
and [then] Nugeman^y was going after sugarbag.

82 niɹunu-ka nan^yɖyi pi-ka me-yiyi
3 sg FEM-TOPIC NC:thing rope-TOPIC 3 sg XIII-make rope
[Then] she was making the rope.

83 meyyiyi d̥iyiɖa
She was making rope again.

84 be-ø-ŋkaɖu mana d̥ini-ka
3 sg X-3 sg-see back 3 sg SIT-TOPIC
She would see him [coming] back as she was sitting.

85 nukunu mana katu nuɹa-d̥ini-ka
3 sg MASC back towards 3 sg (USING FOOT)-3 sg SIT-TOPIC
yi nan^yɖyi pi n^yini-ka be-bir ɹaɹa weyi
and NC:thing rope this-TOPIC 3 sg IX-cover LOC hole
Whenever he would come back she would bury the rope in a hole.

Note use of past subjunctive.

86 ɖaɖata nugemaŋ^y maɖa be-ŋkaɖu
 all the time Nugemaŋ^y NEG 3 sg X-see
 Each time Nugemaŋ^y didn't see it.

87 ɖaɖata me-ɖini-ya
 all the time 3 sg XIII-3 sg SIT-DUB
 All the time she kept on sitting and making [the rope].

88 beje
 finished

meɖiniya is a puzzling form on the surface. It appears to be an elliptical form of meyiyaɖiniya.

89 wuɖam-tap waɖa naŋ^yɖyi pi
 3 sg IV PERF-try now NC:thing rope
 She began to try out the rope.

90 wuɖam-ɖuɖ
 3 sg IV PERF-send down
 She sent it down.

91 kaŋanu piɖet
 half it stopped
 It stopped half way.

92 wuda

no

"No!"

93 mam

3 sg SAY/DO PERF

She said

94 kuguk ɖaɖata

wait all the time

"Wait a while yet"

95 yi mam-yi ɖiyiɖa

and 3 sg SAY/DO PERF-and again

And she worked at it again.

96 mamɣi ɖiyiɖa

She worked at it again.

97 nukunu paɖanduwi yi baɖam-bir

3 sg MASC 3 sg arrive PERF and 3 sg IX PERF-cover

He arrived [back] and she covered [it].

98 na

99 nɣini yuwu

isn't that so

this indeed

That's the way it was, wasn't it?

100 mam-yi dīyida wudam-tap
 3 sg SAY/DO PERF-and again 3 sg IV PERF-try
 She made it and tried again.

101 manda waḍa pīji-da
 close-up INCHOATIVE 3 sg STAND-IMPERF
 It was getting closer [now].

102 beje
 finished

103 tiduk nʸini-ka mam-yi nʸini
 then this-TOPIC 3 sg SAY/DO PERF-and this
 yunam-tawījur-ka
 3 sg VI PERF-extend-TOPIC
 Then she worked at it and made it longer.

The verbal element, tawījur "extend" is perhaps analysable as
 a verb root jur "pull" (see Appendix 2) and the incorporated body
 part form: tawī "lip" ie. pull lip = extend.

104 beje
 finished

105 wudam-jinumi waḍa katu putek
 3 sg IV PERF-take how towards ground
 She completed it now right to the ground.

106 kan^yi pam-bat waɗa nan^yd^yi pi n^yini yuwu
 this (near) 3 sg X PERF-fall now NC:thing rope this indeed
 This rope fell to the ground here.

107 beɓe
 finished
 "It's finished!"

108 mam
 She said.

109 nukunu mana nuɗa-ɗur-ka
 3 sg MASC back 3 sg (USING FOOT)-go to hunt-TOPIC
 He went away to hunt.

110 beɓe
 finished

111 nukunu-ka niɗunu-ka mam-na
 3 sg MASC-TOPIC 3 sg FEM-TOPIC 3 sg SAY/DO PERF-3 sg MASC BEN
 kaɗu mamayyi n^yini yuwu
 NC:person child this indeed
 She said to this child.

112 tani-|a-nu pi kan^yi
 2 sg HAB-climb-FUT rope this
 "Climb [down] this rope!"

120 pi nʸini-ka ɖim-ku waɖa niɣunu yuwu
 rope this-TOPIC 3 sg SIT PERF-chuck away now 3 sg FEM indeed
 Then she chucked this rope away.

121 nugemanʸ maɖa be-ɔ-ŋkaɖu nukunu
 Nugemanʸ NEG 3 sg X-3 sg-see 3 sg MASC
 Nugemanʸ couldn't see him.

122 beɛ
 finished

123 nukunu-ka nugemanʸ wuɗan
 3 sg MASC-TOPIC Nugemanʸ 3 sg INVISIBLE TO SPEAKER MOVE PERF
 He, Nugemanʸ, came [back].

124 kale mam-ŋe ŋaɗa kaɖu yuwu
 Mother! 3 sg SAY/DO PERF-3 sg FEM BEN where NC:person INTERROG
 "Mother" he said to her "where's he gone?"

125 ŋaɗa kama maɖa tʸe me-baytʸ
 where perhaps NEG ear 3 sg XIII-take
 "I don't know where."

The idiomatic expression for "know" is literally "take ear" cf.
 English "lend an ear (to what is being said)".

134 manan-ø-ŋinda-bet

3 du ?-3 sg-du FEM-take

They took him [back home].

This form is puzzling: the preferred (and expected) forms mamŋindabet or mametŋinda were accepted and said by native speakers to be the same cf. 136

135 nukunu-ka mam

3 sg MASC-TOPIC 3 sg SAY/DO PERF

He (the child) said:

136 nugeman^y mam-ŋi-bet ŋaŋa merk katu

Nugeman^y 3 sg XIII PERF-1 sg-take LOC moon towards

"Nugeman^y took me to the moon."

137 ŋaŋi-da 138 a beje berrata wakay

1 sg HAB-IMPERF ah finished completely finished

"I was staying [there] Ah! that's completely over and done with."

139 ŋamata wuŋam-ø-ŋinda-ŋinumi waŋa

all the way 3 du IV PERF-3 sg-du FEM-take now

Then they took him back for good.

140 nan^yd^yi pi n^yini-ka mu^yin^y-ka liŋiti-wa

NC:thing rope this-TOPIC word/name-TOPIC Liŋiti-EMPH

This rope, it's name is Liŋiti!

At this point the narrator broke into English:

that's his name, that's... that pi that string pi his
name, ah, what you call it, we call it liḡiti pi liḡiti
... pi .. ah, I got him beḡeḡun (that's right) that's ...

141 pi pi liḡiti pi-ka muḷinʸ-ka liḡiti-wa pi nʸinl
rope rope Liḡiti rope-TOPIC word-TOPIC Liḡiti-EMPH rope this
The rope is Liḡiti; the name of this rope is Liḡiti!

142 kaḡu mamayyi wuḡam-tut ḡa ḡaḡa
NC:person child 3 sg IV PERF-come down place LOC
merk takatu
moon from
The child came down from the moon.

143 kaḡu puk- muṯyḡḡa wuḡam-ḡ-tut yuwu
NC:person (mistake) old woman 3 sg IV PERF- 3 sg-send down indeed
The old woman sent him down.

144 muḷinʸ mundak kanʸi-wa muḷinʸ yuwu
story old this-EMPH story indeed
This [has been] an old story.

145 muḷinʸ ḡalandar taḡunukatu muḷinʸ mundak
story old man from-before story old
... a story of the old men from times gone by, an old story.

2. Nuwit^y (water-snake)

1 muɔɪn^y kan^yi ɲu-ɖit-nu-ka muɔɪn^y ɖa mundak
 story this 1 sg VIII-narrate-FUT-TOPIC story time old
 I'm going to tell a story [now], a story of olden times.

2 manga ɲayi ɲaɖi-ɲinda-lili-da ɖa
 father's mother 1 sg 1 du exc HAB-du FEM-walk-IMPERF place
 ɲaɲa ɲayi ya
 LOC 1 sg DUB
 My grandmother and I were walking around my country.

The hesitancy expressed by ya arises from the fact that ɲadpuk who is Maringarr is not sure what this country of hers (outside Muɔɪnypata territory) is called in Muɔɪnypata.

3 ɲuɔɪni-ɲinda waɖa ku ɲinu-nu-wa
 1 du exc MOVE-du FEM now NC:meat fresh water turtle-DAT-EMPH
 ɲinu-wa-nu
 fresh water turtle-EMPH-DAT
 We were going after fresh water turtle.

Note the unusual ordering in ɲinuwanu.

4 ku ɲuna-ɲinda-ɲini yuwu
 NC:meat 1 du exc USING FOOT- du FEM-1 du exc SIT indeed
 We kept on going after meat.

- 5 ḡuḡam-ḡinda-tut
 1 du exc IV PERF-du FEM-go down
 We went down.
- 6 ḡuḡan-ḡinda manda
 1 du exc MOVE PERF-du FEM close
 We went up close.
- 7 ḡayi-ka ḡuḡini-da waḡa
 1 sg-TOPIC 1 sg MOVE-IMPERF now
 Now I went along
- 8 baḡam-dut-ḡuḡan ku nuwity waḡa
 1 sg IX PERF-find-1 sg MOVE PERF NC:meat water snake now
 Then I chanced on a water snake as I went along.
- 9 da-nayede-da-ḡini ḡara kuḡa
 3 sg I-emerge from (water)-IMPERF-3 sg SIT LOC water
 It was coming out of the water.
- 10 beḡe ,
 finished
- 11 manga ḡaḡim-ḡe-kay
 f.m. 1 sg STAND PERF-3 sg FEM BEN-call
 I called out to my grandmother.

12 ku kan^yi kem
 NC:meat this 3 sg SIT PERF
 "There's an animal (water snake) here!"

13 pi^ɔa
 leave it alone
 "Leave it alone!"

14 ma^ɔa na-be-^t nukun
 NEG 2 sg XIII-arm-grab IRREALIS
 "Don't grab it!"

Literally, "don't grab it's arm" ie. the body of the snake.

15 ma^ɔa nukun na-^t
 NEG IRREALIS 2 sg XIII-grab
 "Don't grab it".

16 mam-^ŋa
 3 sg SAY/DO PERF-1 sg BEN
 She said to me

17 pa-n^yi-lele-nukun
 1 sg X-2 sg-bite-IRREALIS
 "It might bite you."

18 ɔa ti^ɔduk n^yini yuwu
 time late this indeed
 It was too late.

- 19 manan-tama-t waḍa
 1 sg (XIII) PERF-neck-grab now
 I had already grabbed [it by] the neck.
- 20 ku nuwity nyini-ka ?manantamat waḍa?
 NC:meat water snake this-TOPIC unclear on tape
 I'd already grabbed this snake.
- 21 manga ku-ka kan^{yi}
 grandmother NC:meat-TOPIC this
 "Grandmother, there's a snake here!"
- 22 mamṇe
 I said to her.
- 23 watkatu
 come quickly
 "Come quickly."
- 24 nuṇam-winat manga ṇayi manga ṇayi
 3 sg USING FOOT PERF-run grandmother 1 sg grandmother 1 sg
 yuwu manda
 indeed close up
 My grandmother ran up close.
- 25 yi beje
 and finished

26 ku wada pan-ŋinda-baɗ
 NC:meat now 1 du exc VIII PERF-du FEM-strike
 We killed it then.

27 ŋanʔdʔin-ŋinda daja ŋaja tungu wada
 1 du exc HAVE PERF-du FEM back LOC fire now
 Then we took it back to the fire.

28 ŋina-ŋinda-ytʔi-da-ŋaɗi
 1 du exc V-du FEM-cook-IMPERF-1 du exc HAB
 We were cooking it.

29 beje
 finished

3. Tʔandu.

This story concerns the narrator as a small boy being frightened by a boat which his (paternal) grandfather tells him has teeth and might bite him. His father disabuses him of this notion.

1 muɭinʔ kanʔi ŋu-ɗit-nu-ka muɭinʔ ŋayi
 story this 1 sg VIII-narrate-FUT-TOPIC story 1 sg
 I'm going to tell this story, my story.

This introductory narrative formula has appeared in nearly every text collected.

- 2 kangul ɲayi mam-ŋa muɲinʸ-ka
 father's father 1 sg 3 sg SAY/DO PERF-1 sg BEN story-TOPIC
 kanʸi-wa ɲayi kaɖu mamayyi-te nanʸdʸi dingi
 this-EMPH 1 sg NC:person child-TEMP NC:thing dinghy
 yinʸdʸin wungu 3 beje
 engine inside finished
 My grandfather told me this story when I was a child about
 a boat [with] an engine in [it].

The expected form for the temporal inflection on mamayyi is je

- 4 ɲayi-ka ɲuɖana-tut-da dingi
 1 sg-TOPIC 1 sg (IV)-go down-IMPERF dinghy
 nuɲa-da katu ɖini 5 beje
 3 sg (USING FOOT)-IMPERF towards 3 sg SIT finished
 I was going down [and] the dinghy kept coming towards
 [the shore].

The verb forms which appear in elicitation sessions are ɲuɖinitutda and nada. Native speakers claimed they were just different ways of saying the same thing.

- 6 ɲayi-ka ɲem-winduɖ
 1 sg-TOPIC 1 sg SIT PERF-get up
 I got up.
- 7 ɲuni-winat-da-mana-wa ɲaɲa dingi wangu
 1 sg MOVE-run-IMPERF-back-EMPH LOC dinghy away
 I should have run back down to the dinghy.

Note subjunctive form of verb.

- 8 ma
 oh
- 9 kangul ḡayi-ka ḡim-ḡa-kay
 father's father 1 sg-TOPIC 3 sg SIT PERF-1 sg BEN-shout
 maḡan-ḡi-ta
 3 sg (XIII) PERF-1 sg-pursue
 My grandfather shouted to me and ran after me.
- 10 tuḡi-wul katu
 2 sg IV-come back towards
 "Come back!"
- 11 mamḡa
 He said to me
- 12 tuḡiwul katu
 "Come back!"
- 13 ḡayi-ka ḡamam
 1 sg-TOPIC 1 sg SAY/DO PERF
 I said.
- 14 ma taḡku-da kangul
 oh why grandfather
 "Oh, why, grand-dad?"

- 17 tan̩kuda na
 why is that right
 "Is that why?"
- 18 ŋamam
 1 sg SAY/DO PERF
 I said.
- 19 na
 is that right
 "Is that so?"
- 20 ŋamam
 I said.
- 21 yuwu
 yes!
 "Yes, it might bite you! "
- 22 pan^yilɛlɛnukun
 3 sg X-2 sg-bite IRREALIS
 [my grandfather said]
- 23 ŋayi-ka muɟin^y ŋan^yd^yin-na
 1 sg-TOPIC story 1 sg HAVE PERF-3' sg MASC BEN
 I believed his story (lit. I had/took the story for him).

24 ŋamam
 I said

25 muɟinʸ muɟinʸ taytpir-ka kanʸi yuwu
 story story true-TOPIC this indeed
 mam-ŋa-kem
 3 sg SAY/DO PERF-1 sg BEN-3 sg SIT PERF
 "This story he's been telling me is true!"

This sentence arises from muɟinʸ kanʸi taytpirka yuwu
 "This story is true" and kangul muɟinʸ mamŋakem ŋayinu
 "My grandfather told the story to me." The latter sentence
 becomes a relative clause with muɟinʸ as its antecedent in
 the (former) matrix sentence.

26 pa-ŋi-lele nukun dingi ŋanga yuwu nanʸdʸi
 3 sg X-1 sg-bite IRREALIS dinghy this indeed NC:thing
 yinʸdʸin wungu
 engine inside
 "That boat with the engine in it might bite me."

27 ŋaɟaɟe ɟimu yuwu kangul
 what about teeth indeed father's father
 "What about [the] teeth, grand-dad?"

28 mam-na
 1 sg SAY/DO PERF-3 sg MASC BEN
 I said to him.

- 29 pana damata kumbaja pana yuwu dimu yuwu
 there all the time first there indeed teeth indeed
 "The teeth are always there right up front!"
- 30 pan^yilelenukun yi ka-n^yi-winat nukun
 3 sg X-2 sg-bite-IRREALIS and 3 sg IX-2 sg-take away IRREALIS
 "It might bite you and take you away."
- 31 a beje
 ah finished
- 32 n^yai-ka bejemata muin^y
 1 sg-TOPIC all finished story
 I said: "[That's] the whole story [then]".
- 32 is a remarkably elliptical statement: the verb form n^yamam
 "I said" has been deleted; the direct speech is actually "it's
 all finished for me as far as the story goes."
- 33 n^yan^yd^yin-na
 1 sg HAVE PERF-3 sg MASC BEN
 I believed him.
- 34 n^yana-wup n^yadi-da
 1 sg I-sit 1 sg HAB-IMPERF
 I was sitting [there], staying [there].

40 naŋkaɪ mam-mba
 who 3 sg SAY/DO PERF-2 sg BEN
 "Who told you?"

41 mam-ŋa
 3 sg SAY/DO PERF-1 sg BEN
 "He told me."

42 kaŋguɪ ŋayi mamŋa
 father's father 1 sg 3 sg SAY/DO PERF-1 sg BEN
 'My grandfather told me:

43 pa-nʏi-lele nukun
 3 sg X-2 sg-bite IRREALIS
 "It might bite you" '

The narrator reports what his grandfather said.

44 awu
 No
 "No!

45 naŋɔdʏɪ lumbu nimin katu ku-nʏi-taɪ
 NC:thing buttocks back towards 3 sg VIII (SUBJ)-2 sg-cut
 nukun
 IRREALIS
 The back [of the boat] might cut you."

The father is referring to the propellor when he says that the
 buttocks (back part) of the boat towards the back might cut you.

46 mam

3 sg SAY/DO PERF

He said.

47 mananga dimu paŋu yuwu

NEG teeth there indeed

"There are no teeth there; it hasn't got any teeth"

48 yuwu 49 yuwu 50 ma

yes yes I said

"Ah, yes, yes!" I said.

When the tape was played back to the narrator he said ma was a mistake and should be replaced by ŋamam.

51 muɭinʷ ŋayi-ka

story 1 sg-TOPIC

This is my story.

52 kangul ŋayi-ka ŋanʷdʷin-na-wa

father's father 1 sg-TOPIC 1 sg HAVE PERF-3 sg MASC BEN-EMPH

I believed my grandfather.

53 beɭe 54 muɭinʷ muɭinʷ mundak yuwu

finished story story old indeed

[This is] an old story.

- 55 muɔɪnʸ ɲayi ɲuɔan-tut-ɔe kangul
 story 1 sg 1 sg MOVE PERF-grow up-TEMP father's father
 ɲayi mam-ɲa nanʸdʸi dingi-nu
 1 sg 3 sg SAY/DO PERF-1 sg BEN NC:thing dinghy-DAT
 My grandfather told me the story about the dinghy;
 it was at the time when I was growing up.

This is an unusual use of the dative case inflection: "about;
 concerning." The sentence in full would have two quite distinct
 NPs with dative case marking:

ɲayi ɲuɔantututte kangul ɲayi muɔɪnʸ mamɲa
 ɲayinu nanʸdʸi dinginu

- 56 beɔe
 finished
 The end.

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