The Phonology and Morphology of Marrithiyel

A Preliminary Study

IAN GREEN

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Unless otherwise acknowledged in the text this thesis represents the original work of the author.

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### Abbreviations and Conventions

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>Augmented</td>
</tr>
<tr>
<td>ALL</td>
<td>Allative</td>
</tr>
<tr>
<td>AUX</td>
<td>Auxiliary</td>
</tr>
<tr>
<td>Cl</td>
<td>Class Marker</td>
</tr>
<tr>
<td>CVS</td>
<td>Complex Verb Stem</td>
</tr>
<tr>
<td>Ds</td>
<td>Digging Stick (Noun Class)</td>
</tr>
<tr>
<td>dl</td>
<td>dual</td>
</tr>
<tr>
<td>ERG</td>
<td>Ergative</td>
</tr>
<tr>
<td>Exc</td>
<td>Exclusive</td>
</tr>
<tr>
<td>F or Fut</td>
<td>Future</td>
</tr>
<tr>
<td>nFl</td>
<td>non Flesh Food (Noun Class)</td>
</tr>
<tr>
<td>Fem</td>
<td>Feminine</td>
</tr>
<tr>
<td>G</td>
<td>Goal</td>
</tr>
<tr>
<td>hA</td>
<td>higher Animate</td>
</tr>
<tr>
<td>I or Inc</td>
<td>Inclusive</td>
</tr>
<tr>
<td>INDEF</td>
<td>Indefinitiser</td>
</tr>
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<td>Interrogative</td>
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<tr>
<td>INST</td>
<td>Instrumental</td>
</tr>
<tr>
<td>IO</td>
<td>Indirect Object</td>
</tr>
<tr>
<td>lA</td>
<td>lower Animate</td>
</tr>
<tr>
<td>L-A</td>
<td>Locative-Allative</td>
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<tr>
<td>LOC</td>
<td>Locative</td>
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<tr>
<td>M</td>
<td>Minimal</td>
</tr>
<tr>
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<td>Masculine</td>
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<tr>
<td>n</td>
<td>non</td>
</tr>
<tr>
<td>No</td>
<td>number</td>
</tr>
<tr>
<td>O or Ob</td>
<td>Object</td>
</tr>
<tr>
<td>pl</td>
<td>plural</td>
</tr>
<tr>
<td>Pres</td>
<td>Present</td>
</tr>
<tr>
<td>PreVb</td>
<td>Pre-Verb</td>
</tr>
<tr>
<td>PURP</td>
<td>Purposive</td>
</tr>
<tr>
<td>s or sg</td>
<td>Singular</td>
</tr>
<tr>
<td>S or Su</td>
<td>Subject</td>
</tr>
<tr>
<td>SCE</td>
<td>Source (Ablative)</td>
</tr>
<tr>
<td>Tr</td>
<td>Tree, Wood, Honey, Tobacco, Thing (Noun Class)</td>
</tr>
<tr>
<td>U</td>
<td>Unit Augmented</td>
</tr>
<tr>
<td>Wp</td>
<td>Hand Held Weapon (Noun Class)</td>
</tr>
</tbody>
</table>
* X
(* X)
* (X)
A(X)*

X is ungrammatical
Example is ungrammatical if X is included
Example is ungrammatical if X is not included
Recursive formula,

\[ A(X)^* \rightarrow A(X)(X)(X)(X) \ldots \]

- or +
#
#
[
/ /
1.1 Linguistic Type

In the broad typological division of Australian languages, Marrithiyel is classed as a non Pama-Nyungan or prefixing language. It shares with the other languages of Arnhem Land and the Kimberleys the property of cross-referencing core clause participants - e.g. subject, object, indirect object - with pronominal prefixes attached to the verb. Marrithiyel additionally has further options for cross-referencing certain other participants, e.g. purposive NPs, as pronominal verbal suffixes. Information about tense and certain specifications of participant number are also conveyed by verbal suffixes.

The pronominal prefixes form part of the "auxiliary". The auxiliary is an obligatory constituent of every Marrithiyel verb. It has three basic slots. The first slot is always filled by a subject morpheme. The third slot takes morphemes encoding object, indirect object, locative - allatives (of intransitives), or information about transitivity, the choice of which morpheme appears being determined by a strict selection hierarchy. Cross-referencing with a direct object prefix is only available for objects of highly transitive actions. The second slot is filled by an auxiliary verb stem, which acts to classify or further delineate the action or event denoted by the main verb.

Data so far shows that many verb stems are able to co-occur with a number of different auxiliaries, but the degree of productivity of auxiliary prefixing has yet to be fully investigated. Also, at the present stage of analysis, the semantic functions of the auxiliary verbs cannot be fully explicated, and the precise meaning which a particular auxiliary verb brings to a particular verb stem must be lexically specified.

There are fifteen distinct auxiliary verbs. Ten of these are transitive, five intransitive. Four of the transitive and the five intransitive auxiliaries are able to function as verbs without a co-occurring main verb stem. These are referred to as "simple" verbs. The other auxiliary verb stems are labelled "pre-verbs".

Role marking in Marrithiyel is achieved by a combination of pronominal cross-referencing on the verb, word order, and case inflections suffixing to the final constituent of an NP. Marrithiyel word order is fundamentally S-O-IO, with the verb appearing immediately after or before the object. An ergative suffix, /kin/, normally attaches to transitive subject NPs which are displaced from this order, or whose role as agent is semantically marked. Otherwise NPs in these major syntactic roles are unmarked. A suffix homophonous with the ergative marks transitive instrument. The other roles coded by case inflections are non-transitive instrument, purposive, source
(ablative), locative and allative. There is no genitive derivational affix. Possession is marked either by juxtaposition or by a free form pronoun specifying the possessor.

A set of generics and corresponding prefixes mark nouns which belong to the following major classes: human (male and female), lower animates (this is primarily the category of flesh foods), edible flora (i.e. primarily non-flesh food, but excluding honey and milk), and non-edible trees and bushes. Honey and tobacco are marked as belonging to this last category; its generic and prefix are also used to derive nouns referring to "things" with particular attributes. The prefixes for these major classes are copied from the head noun onto other NP constituents. The singular male and female and the non-singular human class markers are somewhat unusual in taking verb-like person and (in the non-singular) number inflections; they also have a limited syntactic behaviour. There are two further minor classes: certain hand-held weapons (e.g. clubs, boomerangs, but not spears or woomeras) and digging implements. These classes have only about twenty members each.

There are seven basic free form pronouns, with an inclusive/exclusive distinction in the first person. Free pronouns behave syntactically like nouns. The pronominal number system is not readily classified; the conventional categories of singular, dual, plural etc. do not provide for a neat analysis, and a reanalysis in terms of the minimal/augmented categories which have proved useful in other Arnhem Land languages (e.g. McKay (1976) for Rembarrnga) does not fare much better. In fact, terms from both these systems are needed to account for some of the data, and the number cross-referencing of first inclusive person is not conveniently characterised by terms from either system.

Marrithiyel has four vowels and fifteen distinctive consonants. The most striking feature of the phonemic inventory, within a comparative Australian framework, is the absence of corresponding nasals for the retroflex and interdental obstruents. Largely for phonetic reasons these obstruents have been symbolised as fricatives in this study. Otherwise the phonological system is fairly normal by (northern) Australian standards.

1.2. The Language Situation

Marrithiyel is a language of the Daly River region of the Northern Territory of Australia, located approximately 160 kms south-south-west of Darwin. According to my informants it was traditionally spoken on the plains between the Moil and the Daly Rivers. The language name comes from /marri/ "words, language" and /thiyel/ "paperbark tree". The Marrithiyel people are also known and refer to themselves as "Brinken"; Stanner claimed (1938, p 101) that this was a Malak Malak term, originally not liked by the Marrithiyel, although they show no particular aversion to it
now. The size of the Marrithiyle group before European contact is unknown. Like the neighbouring tribes, they moved from their traditional country to camp on the banks of the Daly and work for European miners and farmers. White settlement of the area began in the 1890s, and Stanner (1933, p 378) reports that by 1932 most of the Aboriginal men of the region were employed as labourers. Marrithiyle country has been virtually uninhabited since that time and it is only in the last few years that the people have made any serious attempt, with the setting up of the Tyilak outstation, to move back into the area.

Today there are probably as many as two hundred people entitled to be called members of the Marrithiyle tribe, most of them living at the Daly River Mission or in Darwin. There are roughly twenty-five out of this two hundred, all aged over forty, who learnt Marrithiyle as a first language, but only ten of these - from the family of Bill Parry, my principal informant, at Tyilak, and the family of Roy Kelly in Berrimah - still use Marrithiyle as the major language of daily conversation. It is not clear what degree of control of the language the remaining Marrithiyle people have. My research indicates that no-one under about thirty knows any more than a few lexical items, but there is insufficient data to form any conclusions about the competence of the older people. At the Daly River Mission they speak mostly Ngangikurrunggurr, which is now the first language of Marrithiyle children there.

1.3. Dialects and Surrounding Languages

Tryon (1974) claims that Marrithiyle has two further dialects: Marityabin and Maridan (Tryon's orthography). Because of the restricted time available for field work, data in this study comes only from speakers who identify themselves as Marrithiyle. Tryon's reasons for identifying Maridan as a dialect are rather sketchy and none of my informants believe that there are any differences between Marrithiyle and the language spoken by the Maridan. They claim that the term Maridan is simply geographical, coming from /marri/ "words, language", and /tan/ "coolibah tree", labelling the Marrithiyle group who inhabited the southernmost section of their country. There are few Maridan people left. All informants, however, do agree on the dialect status of Marityabin, describing it as the "same" as Marrithiyle but "heavier".

Marrithiyle was contiguous with at least the following languages: Maranungku, Marengar, Maramanandji, Yunggor, and Ngangikurrunggurr. Tryon, in his 1974 volume, offers sketch grammars of all these languages and identifies them as members of the Daly family, with the first three above being most closely related to Marrithiyle. The claims of genetic relationship are based on cognate counts over a two hundred word list and grammatical
similarities, and would therefore seem to constitute at best a prima facie case for genetic closeness. The existence of proto-Daly, or any sub-group within it, is far from proved, and I have made no assumptions as to such in the course of any explanations offered in this study.

1.4. Previous Work

The first linguistic analysis of Marrithiyel was by the anthropologist W.E.H. Stanner (1938). Since then only Tryon (1974, pp 70-93) has done any substantial work. Of the other languages of the region, only Maranungku (Tryon, 1970) and Malak Malak (Birk, 1976) have been described in any detail. Walsh (1976) has described the Murinypata language of the nearby Port Keats region, but there is little similarity between that and any of the Daly languages.

There are considerable discrepancies between the data and analyses presented by Tryon and that presented in this study. I have chosen to discuss these discrepancies only where they seem indicative of changes in the language, i.e. where Tryon's earlier transcriptions, quite possibly from speakers considerably older than my informants, possibly reflect earlier stages in the language. In other cases, where transcriptions of various words differ sporadically, and where the advantage of further data has allowed me to present a more advanced analysis, I have not commented.

Tryon's transcriptions of, and orthography for, the other languages of the Daly region have been retained.
2.1.1. Phonemic Inventory

Marrithiyel has four distinctive vowels:

- /i/ ... close front unrounded
- /ɛ/ ... half-open front unrounded (henceforth symbolised by /e/)
- /u/ ... close back rounded
- /ə/ ... open unrounded (henceforth symbolised by /a/)

The following minimal pairs exemplify these distinctions word-medially.

<table>
<thead>
<tr>
<th>(1)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ngaya</td>
<td>mother-in-law</td>
<td>panti</td>
</tr>
<tr>
<td>ngiya</td>
<td>she, her</td>
<td>punti</td>
</tr>
<tr>
<td>miri</td>
<td>eye</td>
<td>warri</td>
</tr>
<tr>
<td>muri</td>
<td>finger</td>
<td>werri</td>
</tr>
<tr>
<td>meri</td>
<td>man</td>
<td></td>
</tr>
</tbody>
</table>

Occurrence of initial vowels and word final contrasts are discussed in 2.2.1. and 2.1.4. respectively.

There is no length contrast for vowels.

I have analysed fifteen distinctive consonants, grouped below in terms of the active articulator. Where variant from the orthography to be used in this description standard IPA symbols are given in parentheses.

<table>
<thead>
<tr>
<th></th>
<th>Peripheral</th>
<th>Apical</th>
<th>Laminal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bilabial</td>
<td>Velar</td>
<td></td>
</tr>
<tr>
<td>Stops</td>
<td>p</td>
<td>k</td>
<td>t</td>
</tr>
<tr>
<td>Fricatives</td>
<td></td>
<td>ʂ (ʂ)</td>
<td>th (θ)</td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>ng (ŋ)</td>
<td>n</td>
</tr>
<tr>
<td>Liquids</td>
<td></td>
<td></td>
<td>rr (Alveolar Trill or Flap, r or r)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>r (Post-alveolar continuant, r)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>l</td>
</tr>
<tr>
<td>Semi-Vowels</td>
<td>w</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following pairs exemplify these distinctions for each major manner of articulation class:
(2) **Obstruents (Stops and Fricatives)**

p/k: kinypurr ... He's chopping it.
    kinykurr ... He's hitting it.

p/t: ngipiwiinywa ... I will tell them.
    ngitiwinywa ... We (excl.) will look for them.

p/ty: panti ... sun
    tyanti ... spear

p/th: apanpan ... somewhere
    apanthan ... where, in what direction?

k/t: kitinkiya ... He saw us (incl.,2)
    kitintiya ... He saw them.

k/ty: kapaty ... sharp (of a blade, razor etc.)
    tyapaty ... small

k/q/th: malika ... long
    mịan ... scrub pandanus
    malitharra ... bandicoot

k/~/th: malika ... long

k/q/th: malika ... long

(3) **Nasals**

m/ng: muri ... finger
    nguri ... penis

m/n: kumwa ... He will paint it.
    kunwa ... He will go.

m/n: kumwa ... He will paint it.
    kunwa ... He will go.

m/n: kumwa ... He will paint it.
    kunwa ... He will go.

m/ny: kinima ... You (sg.) said it.
    kininya ... You (pl.) went.

ng/n: kunga ... I am standing.
    kuna ... You (sg.) are standing.

ng/ny: nang ... he, him
    nany ... you (sg.)

(4) **Liquids**

rr/r/l: yerri ... tail
    yeri ... child
    yeli ... digging stick

(5) **Semi-Vowels**

w/y: werri ... grass
    yerri ... tail
(6)-(8) below give further pairs illustrating the distinctiveness of consonants within each articulator class:

(6) Peripheral

p/m/w : piyi ... head
miyi ... non-flesh food
wiyi ... wild, crazy

p/ng : kimipal ... He's doing it for you (sg.).
kimingal ... He's doing it for her.

k/m : muku ... woman
mumu ... turkey

k/ng : kaka ... "uncle" (mother's brother)
ngaka ... sister

k/w : kimikinya ... He spoke to us (excl.).
kimiwinya ... He spoke to them.

ng/w : ngungku ... female (sg. class marker)
wungku ... stingray

(7) Apical

t/n/ŋ/rr : mati ... fresh water barramundi
mani ... money (loan word)
maŋi ... belly
marri ... words, language

t/r : wuti ... water
wuriwuri ... red

t/l : witiwiti ... crooked
wili ... star

n/r : kani ... He is going.
kari ... lily

n/l : pan ... indefinite interrogative suffix
pal ... 2nd sg. verbal purposive suffix

ŋ/r/l : yeŋi ... hole
yeri ... child
yeli ... digging stick

(8) Laminal

ty/ny : kuŋinity ... He is eating (sitting down).
kuŋininy ... He is sitting by you (pl.).

ty/th/y : tyangi ... ear
thangki ... bottom
yangi ... breast

th/ny : malitharra ... bandicoot
kirrinang ... We(excl.) went along.

ny/y : manyirr ... sand
mayirang ... goose
Consonantal distribution and neutralisation of certain of the above contrasts are considered in 2.1.4. and 2.2.

The phonemic inventory presented here varies from that given by Tryon (1974, p71) who tentatively lists an additional vowel /ɔ/ and additional retroflex consonants /ŋ/ and /ɾ/. Although Tryon does not discuss the phonetic shape of /ɔ/ he presumably means to represent a centralised non-rounded vowel rather than the half-close front rounded vowel which the symbol conventionally denotes. In his study of MalakMalak in the same volume (p2) he uses this symbol for a vowel later described by Birk (1976, p11) as "mid close retracted front unrounded" and in a separate study of the Daly language Maranungku (1970, p7) he employs the conventionally equivalent symbol /œ/ to represent the centralised non-rounded /ɜ/, as in English "fur". Disturbingly, my research into Marrithiyel has produced no evidence for positing either a synchronic or historic phonemic centralised vowel. /ɜ/ has only been recorded on a few occasions, where it appeared as a rapid speech variant of /i/ between liquids. Thus:

/pulirring/ --- [poʊərrɪŋ] ... sheet of paperbark
/akarrirr/ --- [aɡærərr] ... black bream

The centralisation of /i/ in this environment would appear to result simply from the failure of the articulatory musculature to fully raise and front the blade of the tongue between consonants which require retraction and raising of the tongue tip. This allophony, however, does not account for the discrepancies between Tryon's transcriptions of central vowels and my corresponding data. cf.:

(9)  

<table>
<thead>
<tr>
<th>Tryon (1974)</th>
<th>Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>p72. põyi</td>
<td>põyi</td>
</tr>
<tr>
<td>p73. watyųwurang</td>
<td>wetyuwurang</td>
</tr>
<tr>
<td>p273. wetyųwurang</td>
<td></td>
</tr>
<tr>
<td>p76. wörang</td>
<td>wörang</td>
</tr>
<tr>
<td>p268. wurang</td>
<td></td>
</tr>
<tr>
<td>p78. pi</td>
<td>pipi</td>
</tr>
<tr>
<td>p281. põ</td>
<td>tyurr</td>
</tr>
<tr>
<td>p281. työr</td>
<td></td>
</tr>
</tbody>
</table>

It is perhaps possible that Tryon's data is indicative of an historic central vowel which in my informants' dialect has been raised and assimilated to the preceding consonant. Tryon's varying transcriptions might suggest that this assimilation was present as an optional rule in his informants' speech. This theory, though, would still not explain why
Tryon's /tyɔr/ appears in my data with a back rather than a palatal vowel. Alternatively, since a central vowel has been analysed for contiguous Maranungku, it is possible that Tryon's Marrithiyel data came from a dialect group influenced by their neighbours. Tryon (1970,p108) gives /pʊ/ for Maranungku "smoke" for example. However, diffusional processes cannot account for all the discrepancies since the Maranungku word for "head" is given as /piya/ (p105). Until further research can resolve these problems the conflict between the two sets of data remains a cause for concern, particularly since there is evidence that Marrithiyel may have undergone some recent rapid sound changes (see the discussion of geminate laterals in 2.2.3.). For the moment I can merely state that there is no central vowel in the current phonology or the memory of my Marrithiyel informants - they are quite unequivocal in their rejection of /o/ (as [ə] or [ɔ]) in the words in (9) above, and, except for the occasions described above, /ɔ/ is absent from their speech.

Tryon's retroflex /ɾ/ and /ʃ/ appear in my data as alveolars:

(10) Tryon (1974) Green
p79. kigu ny     kininy     ... We (excl.)/you (pl.) are going.
p79. ngi gi ny wa ngininywa   ... We (excl.) will go
p76. karrila karrila   ... stone, rock, coin.

And in one auxiliary verb paradigm Tryon's retroflex lateral corresponds partially to a geminate alveolar lateral:

(11) Tryon (1974,p81) Green
ki li ngki         kil-li-ngki
ngi li ngki        ngi-li-ngki
pi li ngki         pil-li-ngki
ku li ngki         ku-li-ngki

(See 5.1.for glosses for these auxiliaries.)

Since Tryon transcribes only a few of these retroflexes, and since there is no regular environment to suggest an historical or dialectal alveolar-retroflex merger, I will assume that Tryon's data here results from idiolectal or accidental variations rather than from significant phonological processes.

The retroflex obstruent /ɾ/ recorded by Tryon is in this study symbolized as /ʂ/, the fricative being the major allophone of this consonant (see 2.1.3.):

(12) Tryon (1974) Green
p78. ašamu a-šamu    ... long neck turtle
p278. mišan mi-san    ... scrub pandanus
p281. -ašu -ašu      ... laugh (Vb stem)
And Tryon's dental stop is represented here as a dental fricative, /th/.

2.1.2. Realisation of Vowel Phonemes

/i/ and /u/ both have only two major allophones: tense [i] and [u] occurring word finally and before semi-vowels, and non-tense [i̯] and [u̯] occurring elsewhere. Thus:

(13) /puwa/ → [puwa]
/apuyiri/ → [apuyiri]
/mi/yi/ → [mi̯yi]
/mitti/ → [m̯itti]
/ngutiwinywa/ → [ng̯utiwinywa]
/muku/ → [m̯uku]

/u/ has two further minor variants. Before palatals it takes on varying degrees of diphthongisation; this is considered in our discussion of /a/ allophony below. And in one word only, the generic /awu/ "meat", the final /u/ tends to a more open articulation and is frequently realised as [a̯]. According to Tryon (1974, p273), while this generic appears as /awu/ in Marrithiyel and its dialects, it has the form /awa/ in Maranungku. Whether the comparable phonemic structure of the word in the two languages derives from diffusion or genetic inheritance its current phonetic shape in Marrithiyel could well result from pressure towards a lower final vowel from the neighbouring Maranungku.

/a/ has four main variants:
(a) Unstressed word-final /a/ tends to be realised as [a̯] i.e. tends towards a half-open central articulation.
(b) The front [a] is the allophone after laminals and before morpheme internal clusters containing a laminal consonant. e.g.:

(14) /tyangi/ → [tyangi]  ... ear
/thangki/ → [thangki]  ... bottom
/talyak/ → [talyak]  ... woman who's had a child

[a] is also the initial variant of /a/ in the grammatical words /ap/ "perhaps", /ampi/ "no, not" and /apan/ "where".
(c) /a/ is realised as the diphthong [ay] before morpheme final and intervocalic /ty/, and before morpheme final /ny/.

(15) /tyapaty-wa/ → [tyapaty-wa]  ... small + Purp. suffix
/nany-kin/ → [nany-kin]  ... you (sg.) + Erg. suffix
/watyan/ → [watyan]  ... dog
but /manyirr/ → [manyirr]  ... sand
Morpheme final /ty/ and /ny/ also trigger diphthongisation in preceding /u/. Diphthongisation here is not as strong as with the non-high back vowel, the glide being shorter and not as loud.

(16) /muty/ → [muyty] ... bush tobacco
/mawuny/ → [mawuyny] ... ironwood

The only syllable medial diphthongs not produced by this palatal conditioning are found in loan words from English e.g. /waytpela/ "whitefella, white man".
A similar palatalisation of back vowels prior to laminals has been recorded by Birk for MalakMalak (1976,p12).

(d) With one exception [a], an open non-front rounded vowel, occurs elsewhere. The exception is the particle /kak/, where /a/ is realised as a rounded open back vowel, [D]. This realisation is quite anomalous in Marrithiyel phonetics, and since the particle is also recorded by Tryon (1974) for the Daly languages Maramanandji and Pungupungu and by Walsh (1976) for Murinypata in the nearby Port Keats region, diffusional factors may be responsible for the pronunciation.

Rules for the realisation of /a/ are applied in the order in which they are given above. e.g.:

(17) /putya/ → [potya] Rule (a)
      → * [potya] Rule (b) ... string

/tyatyangirri/ → [tyatyangIrri] Rule (b)
      → * [tyatyangIrri] Rule (c) ... I want it.

Further to the rules given thus far, and accounting for most of the apparent violations of them, there is a further tendency for the labial consonants /p/ and /m/, and, to a lesser extent, /w/, to be followed by the tense vowel allophones [u] and [i].

The fourth vowel /e/ has no conditional allophony and is consistently realised as [ɛ].

2.1.3. Realisation of Consonant Phonemes

2.1.3.1. Obstruents

Stops are unreleased in word final and pre-consonantal positions. All stops are voiced after nasals, and all tend to be voiced when intervocalic and non morpheme-final. It is my impression that this tendency is strongest with the apico-alveolar /t/, which is rarely voiceless in the intervocalic
environment, and weakest with the lamino-palatal /ty/, which more commonly fails to be voiced between vowels and for which, unlike the apical stop, the voiceless intervocalic variant is quite readily accepted by informants. In addition, /t/ is voiced morpheme initially. Stops are voiceless elsewhere.

/s/ and /th/ follow the voicing rules for stops. /th/ is voiced after nasals and patterns with the laminal stop in having an optional and frequently not applied intervocalic voicing. /s/ occurs only intervocically and morpheme initially and patterns with the apico-alveolar stop in being always voiced in these positions. (Note that the presence of this rule partly justifies our use of a voiceless symbol for a phoneme which is always realized as voiced.)

Both /p/ and /ty/ have stop and fricative allophones in free variation in morpheme initial and non morpheme-final intervocalic position. The bilabial obstruent is produced without pronounced lip rounding and as a result the fricative allophone has more of a labio-dental quality, like English "f", than the fully rounded [ɸ].

/th/ is a lamino-dental consonant produced with the blade of the tongue between the teeth. In all positions in which it occurs /th/ can be realised as a stop, an option exercised more often post-consonantally than in any other position. However, /th/ is most frequently pronounced as a fricative and even when complete dental closure is achieved it normally has a fricativized release. Unlike the other continuant obstruent allophones, fricative /th/ is articulated with marked turbulence.

/s/ is apico-post-alveolar, and realized variously as [z(r)], [dz(r)] and [d(r)], i.e. as a retroflex fricative, affricate and stop with rhotic release. The fricative is the most common variant while the stop appears only rarely; the rhotic release may be omitted, but is normally present to some degree. Tryon (1974,p25) also reports a rhoticised retroflex for the Marrithiyel dialect Marityabin but not for Marrithiyel itself. Otherwise rhoticised stops have only previously been reported in Australia as a minor areal feature in Northern Cape York and in Yandruwandha in central Australia (Busby, 1979,p25).

Phonemic Fricatives are by no means common in Australian systems, occurring in only 28 (20%) of the languages covered in Busby's 1979 study. Marrithiyel /s/ is particularly noteworthy. No retroflex fricative has been claimed for any other language in the country and, according to Busby (ibid), the rhoticised obstruents found elsewhere in Australia function phonotactically as stops. Because of this it is necessary to explain the fricative analysis and restrict its implications. It is important to note
that the fricative analysis does not constitute a claim that the absence
or presence of continuance is the critical feature distinguishing the two
laminal and two apical obstruents. Since /ty/ has a continuant allophone,
and since the stop and fricative phonemes have different points of articu-
lation, such a claim has no strong phonetic basis. Nor does the brief
phonology of Marrithiyel (see 2.4.) show up any behaviour by fricatives
as a class which would provide a phonological basis for the claim. Primarily,
the tabling of the dental and retroflex as fricatives in 2.1.1. reflects
their predominant phonetic realisation. This classification has no con-
sequences for the feature analyses necessary for phonological rules and
is not always pertinent to the phonotactic analysis, where /th/ is distin-
guished from /s/ by its ability to appear post-consonantally. Phonotacti-
cally, though, the fricatives do behave as a class in their failure to
appear syllable finally i.e. in pre-consonantal and word-final position.
The continuant variants of the stops /p/ and /ty/ also do not appear in
this position. The sharing of this constraint between fricative allophones
and the dental and retroflex phonemes provides some phonotactic justifi-
cation for the classification of these phonemes as fricatives.

There exists no neat alternative to the fricative analysis. /th/
could possibly be reclassified as a stop, in accordance with its general
phonotactic behaviour; it would then, however, need to be exempted from
the syllable final position possible for the other stops, and no economy
would be achieved by the recategorisation. /s/ is possible alternatively
analysed as a pre-stopped rhotic. While /s/ is liquid-like in its failure
to appear post-consonantally, and like /r/ in not appearing in clusters
at all, it would have to be specifically listed as, unlike the other rhotics,
being able to occur word initially. Again, the reanalysis would achieve
no economy. Further, the possibility for omitting the rhotic release in
surface realisation would argue against representing this phoneme as
fundamentally a rhotic. The rarer realisation of /s/ as a retroflex stop
rather than a flap also argues against rhotic representation.

/s/ is also analysable more abstractly as a /tr/ cluster, thus
removing it from the phonemic inventory altogether. The fricative allo-
phone would then be derived by articulatory simplification, the stop as-
similating to the target point of articulation of the /r/ and, while re-
main ing an obstruent, assimilating also the continuance of the /r/. This
analysis would complicate our phonotactics; we would now have to postu-
late a syllable initial cluster unable to occur post-consonantally. This
would be the only syllable initial cluster in the language, and the only
cluster having a liquid as second element. (Note that Tryon proposes a
/tr/ cluster for Maranungku (1970,p10); like Marrithiyel /s/, the cluster
appears only initially and intervocally. Tryon does not mention whether
/tr/ is ever realised as a single segment and analyses no retroflex phoneme for the language.)

Given the failure of alternative treatments to produce more economic analyses the fricative analysis, that is, the one closest to phonetic reality, will be maintained in this study. We can note that within the Daly River region, for the Ngangikurrunggurr language south of Marrithiyel, stop-fricative contrasts at the one point of articulation have been mooted though the precise nature of the contrast has thus far remained fairly elusive (Tryon, 1974, p231; Reynolds, pers. comm.). Whatever the historic source and role of the dental and retroflex phonemes diffusional pressure may therefore be responsible for the current Marrithiyel tendency to treat the two obstruents which lack corresponding nasals phonetically and, in one important respect, phonotactically, as continuants.

2.1.3.2. Nasals

Apart from some speakers' sporadic dentalisation of /n/ prior to the dental /th/, /n/ and /m/ have no noteworthy allophones. /ng/ is generally realised as a back dorso-velar nasal. However, prior to /i/ and pre-consonantally and word-finally following /i/, /ng/ has a considerably fronter articulation, giving it a discernible secondary palatal quality. Prior to /i/ it has a marked palatalized release:

(18) /ngina/ \[ng^y InA\] ... I went.
/milnginy/ \[mIln^g Yny\] ... large rock, rocky outcrop

/ny/ correspondingly has a markedly front articulation, with the blade of the tongue against the forward palatal region. This fronting can present some initial difficulty for at least the native English speaking learner of the language, since the secondary articulation of the velar can be sufficiently strong as to cause it to be misinterpreted by him as a laminal, and since informants tend to interpret laminals articulated to the rear of the palatal region as velars. It should be noted that the distinction between /ng/ and /ny/ in the environment of /i/ is a particularly critical one in verbal morphology, e.g.:

(19) /ki-tin-ngi-ya/ ... He saw me.
/kupu-l-ing-kurr-wa/ ... He will hit me. (with a club, fist, etc)
/kupu-l-iny-kurr-wa/ ... He will hit you (sg). (with a club, fist, etc)

/ng/ is optionally weakened to /w/ or /ə/ when word initial and prior to /u/, which consequently takes on some nasalization.
2.1.3.3. Liquids and Semi-Vowels

The liquids show little allophonic variation. /rr/ is realised as an alveolar flap or trill intervocalically, and elsewhere as a trill only. /r/ is a post-alveolar approximant. /l/ is an alveolar lateral, with dark (velarized) articulation after the back vowels /u/ and /a/ and clear articulation elsewhere. The velarization of /l/ seems to lend it some rhotic quality and as a result the distinction between /r/ and dark /l/ is probably, to English ears, the most elusive contrast in the language. This contrast occurs only intervocalically.

Semi-vowels also have no significant allophones. They are not dropped word initially.

2.1.4. Comments on Functional Load

2.1.4.1. Vowels

/a/ is the only vowel which occurs word initially. All vowels have been recorded medially and finally. Further to the medial contrasts illustrated in 2.1.1. above, the pairs below show word final vowel contrastiveness:

(20) tyingilwi ... pelican
    awu ... beef
    lawa ... damper
    wewe ... vomit

/wewe/, which functions both as a noun and a verb stem, is, however, the only recorded word final occurrence of /e/. The only further morpheme final occurrence is in the interrogative verbal prefix /pe/. Otherwise /e/ appears root medially only, where it does not occur following the velar consonants /p/ and /k/ or the rhotic /r/ and nasal /ny/, which themselves have a limited distribution. /e/ appears in only about 5% of items in my word list and thus would appear to have a low functional load. It must be added that /e/ does appear in items common in discourse, e.g. the third non singular pronoun /weti/, /meri/ "man", the classifiers /yeri/ and /yeli/, the orientation specifying /tiyerr/ "teeth" etc., and a count of its discourse occurrence may prove considerably higher than the 5% for dictionary items.

Except for restrictions following /ny/ (discussed below) the other vowels appear to be distributed roughly equally.

2.1.4.2. Consonants

Of the consonants only /ny/ warrants any detailed comment on functional
It occurs after all vowels in the syllable final position i.e. word-finally and pre-consonantally. In syllable initial position, however, it is more restricted; word-initially, for example, it has been recorded in only one item, /nyuku/ "lies, untruths". (Tryon (1974, p281) also lists this root, though as a verb stem rather than as the noun given by my informants. If this root functioned exclusively as a verb stem then it would not appear word-initially but would still constitute an exception to the general behaviour of word-medial /ny/.) /ny/ is contrastive in its one word-initial occurrence:

(21) nyuku ... lies
    ngungku ... female (sg. Class marker)
    nunta-wa ... You (sg.) will be standing.

Further instances of root and affix initial /ny/ are all to be found word medially in verbal auxiliaries.

In other syllable initial positions, i.e. intervocally and post-consonantally, /ny/ appears before /i/ and /a/. (Note also that only /n/ precedes /ny/ - see 2.2.2.1. below.) Both /nya/ and /nyi/ sequences appear in auxiliaries, while only /nyi/ is found elsewhere. Again here /ny/ is clearly contrastive:

(22) mundaying ... paperbark
    mungiyil ... paddle
    muning ... feather

(23) ki-tin-nyi-ya ... He saw you (sg).
    ki-tin-ngi-ya ... He saw me.
    kumpu-tin-nim-a ... We (incl.,) saw it.

As one might expect from its restricted distribution, /ny/ shows a comparatively low functional load, appearing in only about 3% of items in my word list. But since it has considerable involvement in verbal morphology (see Ch 5.) a discourse analysis would no doubt show a higher frequency of occurrence. Given the articulatory closeness of /i/ prior to /ny/ and /ng/ (see 2.1.3.2.) the exclusive appearance of /i/ after /ny/ in non-auxiliary forms (apart from /nyuku/) is perhaps somewhat surprising, since one might expect the velar/palatal contrast to be neutralised, if anywhere, in this environment. The low frequency in lexical items suggests that /ny/ has been borrowed or is being eliminated from the inventory. While both of these explanations are possible, the appearance of /ny/ verb medially makes the latter more plausible - one does not normally expect borrowings to be infixed. One might suggest therefore that syllable initial /ny/ has been retained prior to /i/ throughout the language because of its critical
contrastiveness in auxiliary forms (as in (23) above).

/s/ and /r/ also have restricted distribution, /r/ occurring only intervocally and /s/ initially and intervocally, and a low frequency of occurrence, each of the order of 5%, in lexical items. They are both found in the environment of all vowels. /r/ does occur initially in one item, /rak tyilak/, the name for the former guardian of the section of Marrithiyel country surrounding Tyilak billabong. This is an archaic name, no longer in regular or common use, and is insufficient basis to assume the historic presence of an initial /r/. One might speculate, though, that with certain articulatory similarities between /r/ and /l/ (see 2.1.3.3.) the most likely explanation for the low functional load of /r/ is that as an historically more widely distributed phoneme it collapsed with /l/ to produce one continuant uninterrupted liquid in most positions.

Current data permits little speculation about /s/. There is some hint of a former pre-stopped lateral (see 2.2.3.) which may once have formed a series with a pre-stopped rhotic which gave rise to /s/, but its low functional load remains unaccounted for.

2.2. Phonotactics

2.2.1. Syllable Structure

If we set aside for the moment the limited possibilities for an initial vowel, Marrithiyel roots and words have the structure:

\[ C_1 V_1 ((C_2)C_3)(C_4 V_2 ((C_2)C_3)) \]

A disyllabic formula is necessary since word initial position \( C_1 \) can be occupied by fewer consonants than can fill second and subsequent syllable initial position \( C_4 \). \( C_2 \) is necessitated by one type of syllable final cluster, discussed in 2.2.2.2. below. The second syllable is marked by parentheses as optional since monosyllables are not systematically excluded; they are, however, comparatively rare, and only thirteen have so far been recorded:

(24) ap ... perhaps
kan ... here/ this
ma ... write it, paint it / come on (2nd sg. Imperative)
nany ... you (2nd sg. Free Pronoun)
nang ... he, him (3rd sg. masc. Free Pronoun)
ngin ... I am going.
pa ... come on, do it (uninflected particle)
tany ... shark
tharr ... stop! (uninflected particle)
wuy ... no
yan ... nose
yirrnga ... salt water turtle species
yu ... yes

Note that the word formula is structured so that syllables are all
consonant initial, i.e. no VV sequences are permitted. There is in fact one tentatively word-medial counterexample to this, involving the preposing of the verb stem /tyatya/ to the /rri/ auxiliary verb. This is discussed in 2.4.1.

Consideration of initial vowels complicates the formula. Only /a/ appears word initially, and only in the following cases:

(a) in the grammatical words /ap/ "perhaps", /apan/ "where" and the negative /ampi/;

(b) in the generic /awu/"meat, flesh food" and as the nominal prefix /a-/; apparently a contraction of /awu/, attaching to animal and edible body part names. Several hundred roots which in discourse require the prefix or the preposed generic have so far been recorded. The word used for "rainbow", /asatimel/, which in Marrithiyel mythology refers to a serpent, has been included in this category of /a-/ prefixed nominals;

(c) in the Imperative/2nd. sg. future auxiliary verb forms /a-rri-/ and /a-nyi-/ (see Ch. 5.).

Note that /u/ appears phonetically in word initial position by virtue of /ng/ elision (as in 2.1.3.2. above). Otherwise neither /u/ nor /e/ appear word, root or affix initially. /i/ is affix initial in certain verbal prefixes (see Ch. 5.) and root initial in only one item, the verb stem /it/ "pick up". Further to the above data /a/ has only been recorded as root or affix initial in the verb stem /asu/ "laugh".

To account for the /a/ initial words the most rigorous modification of the above formula is to add an optional initial syllable:

\[(a(C)) \text{C}_1 \text{V}_1 ((\text{C}_2 ) \text{C}_3 ) \text{ (C}_4 \text{V}_2 (\text{C}_2 )\text{C}_3 ))^*\]

This now accounts for all words except /ap/, which could be included specifically in a disjunctive formula. Modified in this way, however, the formula introduces complications to our phonotactic generalisations; while /rr/ and /nyi/ follow initial /a/, as in (c) above, they do not occur word initially, and /rr/ and /ny/ prior to /i/ cannot otherwise be specified as occupying position \text{C}_1. But these consonants do occur at position \text{C}_4. Given this evidence that initial /a/ behaves more like \text{V}_1 than a \text{C}_1 prior segment we adopt the simpler root and word formula:

\[(\text{C}_1 )\text{V}_1 ((\text{C}_2 )\text{C}_3 ) \text{ (C}_4 \text{V}_2 (\text{C}_2 )\text{C} ))^*\]

This formula has the unfortunate consequence of allowing the minimal word to be a monophonemic \text{V}_1, an implication we overcome by specifying that initial \text{V}_1 requires the presence of at least one other consonant. Except in the case of /ap/, this consonant is always \text{C}_4, the initial segment of a second syllable.

We can now summarise the restrictions on vowel occurrence: while \text{V}_1
and $v_2$ can generally be any vowel, only /a/ need not be preceded by $c_1$, and /e/, while contrastive word finally, only occurs finally in one lexical item (see 2.1.4. above).

We can state the general restrictions on consonant occurrence in the following terms:

(a) $c_1$ cannot be either of the rhotics /r/ or /rr/, nor, generally, the laminal nasal /ny/, only one word initial occurrence of which has been recorded (see 2.1.4.);
(b) Word-medial syllable initial $c_4$ can be any consonant;
(c) $c_2$, the initial segment of syllable final clusters, can only be /rr/;
(d) Syllable final $c_3$ can never be the fricatives /s/ or /th/, the rhotic /r/ or, generally, the semi-vowels /y/ and /w/.

Three glide final syllables have been encountered:

(25) (ka)kaw  ... come here
     wakay  ... finished
     wuy  ... no

These glides appear word finally only; reduplication of /kaw/ elides the glide in the first syllable, as shown above, and the only case of compounding of these morphemes involves insertion of a nasal:

(26) /wakay+tyan/ $\rightarrow$ /wakayny-tyan/  ... finished now

Thus these glides do not produce impermissible glide-consonant clusters.

Note that both /wakay/ and /(ka)kaw/ are particles, not imperative forms derived from regular verbs, and apart from the compound above take no verbal morphology.

2.2.2. Consonant Clusters

2.2.2.1. Intersyllabic Diconsonant Clusters

Intersyllabic diconsonant clusters are represented in our word formula as $c_3c_4$. Stops, nasals and the liquids /l/ and /rr/ can all occupy position $c_3$ and thus appear pre-consonantally. And while all consonants can appear in the position $c_4$ intervocally, the liquids and fricative /s/ may not appear post-consonantally.

The detailed combination possibilities are as follows; note that stop and nasal geminates are included as possibilities in (a) and (b) - gemination is discussed further in 2.2.3.

(a) $c_3$ can be any nasal or the liquids /l/ or /rr/ (i.e. any of the non-obstruents permitted at $c_3$) followed by any stop, the fricative /th/, any of the nasals /m/, /ng/ or /n/ or either semi-vowel.

(b) $c_3$ can be a stop followed by any stop, the fricative /th/, any of the nasals /m/, /ng/ or /n/ or the semi-vowel /w/, i.e. as initial segments
of clusters stops only differ from nasals and liquids in being unable to take a following /y/.

(c) $C_3 C_4$ can be a geminate lateral. In the Marrithiyel spoken at Knuckey's Lagoon the root medial geminate lateral is in variation with a /tl/ sequence; this is discussed in 2.2.3.

As yet the clusters /ty-m/ and /m-t/ have not been attested; I have assumed that this is an accidental rather than systematic gap.

There is one situation in which, further to (a) above, an /n-ny/ cluster is produced: when the final /n/ of the simple verbs "paint" and "write" is followed by the /nyi/ form of the second singular bound object pronoun (see Ch. 5.) e.g.:

(27) (a) ngi-tin-nyi-ya ... I saw you (sg.).
(b) ku-mun-nyi-ya ... He painted you (sg.).

Note that there is a variant form of the second singular bound object pronoun, /iny/, which follows pre-verbs. The failure of the verbs in (27) to select this available form and the absence of any other mechanism designed to avoid the surface appearance of the /nny/ cluster suggests that /ny/ is not systematically excluded here. Given that nasals and liquids otherwise have the same preconsonantal distribution we may tentatively conclude that /ny/ should be included as a permissible post-consonantal in (a) above, adding the clusters /m-ny/, /ng-ny/ and /ny-ny/ to our list of accidental gaps. These clusters are not found, as yet, root medially, and the limited occurrence of morpheme initial /ny/ makes them unlikely to be produced.

Bearing the behaviour of /ny/ in mind, we can restate (a)-(c) above more economically in terms of constraints than by listing the actual combinations. i.e. $C_3 C_4$ can be a geminate lateral; otherwise post-consonantal $C_4$ cannot be a liquid or /s/. Further, if $C_3$ is a stop, $C_4$ cannot be a laminal non-obstruent (i.e. neither /ny/ nor /y/). Restrictions on what consonants can fill $C_3$ now account for all permissible clusters.

Note that no phonological rules are necessary to prevent violations of cluster constraints. In Marrithiyel morphemes are structured so that impermissible clusters are not produced. Apart from lateral gemination, neither the liquids nor /s/ are initial in morphemes which appear post-consonantally - e.g. in case inflections, complex verb stems, verbal suffixes etc. And while /y/ can be verb-stem initial neither of the laminal non-obstruents begin morphemes which might follow stops. In addition, while /l/, /s/ and /y/ all appear root-initially, no compounds have yet been recorded which place /l/ and /s/ post-consonantally or /y/ after a stop.
2.2.2.2. Syllable Final and Triconsonant Clusters

Syllable final clusters, represented in our word formula as $C_2C_3$, consist of the liquid /rr/ followed by a velar stop or a labio-dorsal nasal i.e. by /k/, /m/ or /ng/. The velar consonants occur morpheme finally:

(28) pultyarrk ... black eaglehawk
    ngurrknurrrk ... snore (Vb. stem)
    tinykirrk ... sick
    yirrrng ... salt water turtle species
    purrrngpurrrng ... boil (Vb. stem)

Reduplication of these morphemes, as illustrated above, and suffixing of case inflections, verbal morphology etc. result in tri-consonant clusters. The possible third consonant appears to be covered by our rules above for post-consonantal $C_4$, although /t/, /m/ and post-nasal /ny/ and /y/ have not yet been recorded in this position.

/rrm/ is a derived syllable final cluster, occurring across morpheme boundaries as a result of the suffixing of /-mpa/, an interrogative meaning "what kind of", to generics:

(29) tharrr-mpa ... What kind of thing?
    a-wakirr-mpa ... What kind of fish?

The alternation of /-mpa/ to /-pa/ after other consonant final generics preserves /rr/ as the only permissible initial element for syllable final and triconsonant clusters.

Syllable final clusters of a similar character have been recorded also for Maranungku (Tryon, 1970) and MalakMalak (Birk, 1976). In both cases any of the liquids can be the first segment, while the second segment, apart from one /lng/ cluster reported by Birk (p21), can only be a labio-dorsal stop, /p/ or /k/.

2.2.3. Gemination

As indicated in the discussion in 2.2.2.1., all stops, non-laminal nasals and the lateral /l/ geminate. Most of this gemination takes place across morpheme boundaries, e.g.:

(30) ngu-m-muri-wa ... I will get it.
    kangkilang-nganan ... chewing-tobacco+source suffix
    kumpu-tin-nim-a ... We (incl.,) saw it.
    nga-pup-pal-wa ... I will put it down for you (sg.).
    pik-kingi-m-miri-ya ... I woke up.
    tut-tut-miri ... blunt
    kini-rr-purrity-tyan ... Are you (sg.) fixing it now?

Gemination of laterals across morpheme boundaries is produced by the operation of an optional rule assimilating an apical stop to a preceding lateral; this rule is discussed in 2.4.3. Otherwise lateral gemination across morpheme boundaries occurs only in the /li/ auxiliary verb forms.
E.g. in (31) /li/ is the pre-verb stem; the preceding morphemes vary for tense and for subject person and number. Note that the forms of the subject-tense morphemes below are unique to the /li/ auxiliary:

(31) kil-li- ... 1st excl. non fut. Subject
ngil-li- ... 1st excl. fut. Subject
pil-li- ... 3rd non sg. fut.

Comparison with other auxiliary forms would suggest that the subject prefixes here, and, consequently, the gemination, have been derived historically by processes of vowel elision and lateral assimilation operating on the forms /kirri/, /ngirri/ and /pirri/. Synchronic morpho-phonological operations involve such processes (see 2.4.).

Morpheme internally only the apico-alveolars /t/, /n/ and /l/ geminate, and only in nominal and adjectival roots:

(32) katti ... good (adj.)
ngatta ... house
nennerr ... vein/pipe
purrilli ... liver

Nasal and lateral morpheme-internal gemination is realised, in slow citation and careful speech, as prolonged voicing. In their own syllabification informants rearticulate each of the twin consonants, and assign each to a separate syllable. However, in normal speech, there is frequently no perceptible prolongation of voicing beyond that of a single intervocalic consonant. This is quite a reasonable articulatory simplification given the absence of a thoroughly systematic geminate-single consonant contrast - neither nasal nor lateral root-medial gemination is ever minimally contrastive with a single consonant. These underlying geminates are therefore able to be realised phonetically as single consonants without any ambiguity. One might expect, were Marrithiyel to survive, that these geminates would be reanalysed as singles. Comparison of the data gathered at Knuckey's Lagoon (Berrimah, N.T.) with that collected at Daly River in fact shows this process at work e.g.:

(33) Knuckey's Daly
killa kila ... mother
willi wili ... star
penni peni ... dust

Further, speakers at Knuckey's Lagoon showed a variation between a geminate /l/ and a /tl/ sequence. This provides some interesting points of comparison with Tryon's 1974 list:

(34) Tryon Green:Knuckey's Green:Daly
p270. puritli purrilli purrilli ... liver
p271. kitla killa killa ... mother
p277. pitlak pillak pilak ... ground
p278. witli willi willi ... star
p281. kutluk (Vb) kulluk (Noun) kulluk (Noun) ... cough/snot
p285. kutlik kutlik kullik kulik ... blind
If Tryon's data is correct and represents more conservative Marrithiyel then morpheme-internal lateral gemination, as I have suggested for intermorphemic lateral gemination, would appear to have arisen through assimilation of an apical to a following lateral, and may well be a transient phenomenon in the language, being rapidly simplified to a single consonant.

Unfortunately, conditions at Knuckey's made it impractical to pursue field work there within the time allowed for this study, and data on the Marrithiyel of the speakers there is limited. It may be that the /tl/ sequence, which, on the basis of its variation with the intersyllabic geminate, one assumes to be intersyllabic, derives historically from, or perhaps is better synchronically analysed as, a syllable initial cluster. It may even prove to have functioned systematically as a single sound, i.e. a pre-stopped lateral or a stop with lateral release, which may once have patterned with the stop-rhotic sequence interpreted synchronically as /s/. Though further research is necessary the possibility of this alternative treatment is raised by the absence, in my data, of any separate articulation or syllabification of the /t/ and /l/ in this sequence, and by my impression of the timing of the /tl/ as being shorter and more like a unitary phoneme than regular intersyllabic clusters. Note that Tryon analyses an intra-syllabic /tl/ cluster for Maranungku (1970, p.10); in Maranungku the cluster appears syllable finally, and is the only cluster to appear preconsonantally. Tryon does not discuss its phonetics. There is no lateral gemination.

Were the /tl/ sequence previously a syllable initial cluster its reanalysis as a geminate can be seen as a move to simplify phonotactics; the word structure formula is reduced and, assuming that geminate laterals pre-existed in verbal morphology and were therefore already specified in phonotactics, no new conditions are added to cluster constraints. Alternatively, were it a single sound, its reanalysis may have been a move to eliminate what may have been a phoneme of low functional load.

In contrast to the nasal and lateral root-internal geminates, intermorphemic nasal and lateral geminates are consistently realised in normal speech with prolonged voicing, and they do, in fact, take part in minimal surface contrasts:

(35) (a) ka - ni - ya
   ³s Su go Past
   nF

   He went.

(b) ka - ni - ini - ya
   ³s Su go to him Past
   nF
   ➔ ka - ni - ni - ya (R1, see 2.4.1.)
   ➔ ka - n - ni - ya (R2, see 2.4.2.)

   He went to him.
(35) (a) ki - l - ingki - kurr - a
3s Su PreVb 1IncOb hit, kill Past
nF

He hit us (inc., 2)

(b) kil - li - ngki - kurr - a
1Exc PreVb 3Ob hit, kill Past
Su
nF

We (exc.) hit it.

This provides some motivation for retention of phonetic nasal and lateral geminates across morpheme boundaries. It must be added, however, that this is not a particularly strong motivation. Were the geminates to be eliminated from (35(b)) and (36(b)) they could still be disambiguated from (35(a)) and (36(a)) by the insertion into the clause of free form pronouns. As discussed in Ch. 4, there is a strong tendency for free form pronouns to appear in the clause anyway, regardless of whether they are required for disambiguation of participant roles. Further, there exist morphophonological processes which neutralise the geminate-single contrast for laterals:

(37) ki - l - iti - kurr - a
3s Su PreVb 2/3ns hit, kill Past
nF Ob

→ ki - l - ti - kurr - a (R2, see 2.4.2.)
→ ki - l - li - kurr - a (R3, see 2.4.3.)

He hit you (pl.)/them.

(38) kil - li - iti - kurr - a
1Exc PreVb 2/3ns hit, kill Past
Su Ob

→ kil - li - ti - kurr - a (R1, see 2.4.1.)
→ kil - l - ti - kurr - a (R2, see 2.4.2.)
→ kil - l - i - kurr - a (see 2.4.4.)

We hit you (pl.)/them.

While evidence from stop gemination (discussed below) reinforces the suggestion that gemination is phonetically distinctive only where it carries a significant (semantic) contrast, the semantic priorities which allow that contrast to be neutralised therefore still need to be explained.

In slow speech and citation, stop gemination involves prolonged closure; in syllabification informants assign each of the stops to a separate syllable, with the first stop remaining unreleased. For intermorphemic geminate stops, as with morpheme internal geminate nasals and laterals, the prolongation of closure is frequently not perceptible in normal speech. Since gemination here never creates a minimal contrast with a single consonant,
and since it is established by independent morphemes, this is an unambiguous simplification. Gemination remains cued phonetically by the failure of the stops, underlyingly in a cluster, to satisfy the conditions for the obstruent voicing rule (see 2.1.3.1.) and they remain voiceless. (Given the varying tendencies of stops to obey the voicing rule this cue is of course most reliable for the apical and least reliable for the laminal stop.)

With morpheme internal stop gemination, restricted to the apical /t/, we have both a minimal contrast and a more consistent realisation:

(39) kati ... 1st. excl. non sg. Pronoun: "we, us"
katti ... good (adjective)

This gemination is realised by both prolonged closure, accompanied by abrupt cessation of voicing for the preceding vowel, and a phonetic voicing opposition. Additionally, the geminate usually has a voice onset lag large enough to sound like aspiration. Thus:

(40) kati \[k_{\ddot{a}}h_{i}\]
katti \[k_{\ddot{a}}h_{i}\]

Although (40) above is the only minimal pair for stop gemination all morpheme internal geminate stops maintain this distinctive phonetic realisation.

Gemination occurs internally in only about thirty Marrithiyel roots. As we have seen, it is not a fully systematic contrast and carries a low functional load. I have suggested that lateral gemination has been derived through elision of /i/ and apical assimilation. Lateral gemination is not reported for Maranungku (Tryon, 1970) or MalakMalak (Birk, 1976), and may therefore be an innovation of Marrithiyel or a recent sub-group it may belong to. The restriction of root internal gemination to alveolars would seem to require some explanation. The absence of gemination from verb roots which, appearing word medially are unlikely candidates for borrowing, and the low frequency of root internal geminates in general suggests that they have been borrowed. Neighbouring Maranungku, for example, has root medial gemination of all four stops and at least the nasals /m/ and /n/ (Tryon, 1970, p9), and is a possible source. Tryon's examples in fact provide some cognates with Marrithiyel:

(41) Maranungku (Tryon) Marrithiyel

\[\text{poeënœ}\] pen(n)i ... dust
\[\text{wakkar}\] wakirr ... fish (generic)

The exclusive retention of alveolar gemination in the process of adapting borrowings might then be explained by two factors. Firstly, the contrast between the pronoun /kati/ and the lexical item /katti/, "good", however it may have arisen, may have been sufficiently crucial for apical stop
gemination to be maintained as phonetically distinctive. Similarly, the minimal contrastiveness of the derived alveolar nasal geminate, as in (35) above, which I shall assume pre-existed, may have been a sufficient precedent for geminate /n/ to be retained in the borrowing process. An interpretation of root-medial gemination as an apico-alveolar property may have then facilitated the derivation of geminate /l/.

It should be noted that Maranungku is putatively related to Marrithiyel (Tryon, 1974). Marrithiyel's limited root internal gemination may therefore derive from a former series of root-medial geminates something like the series currently in Maranungku. In this case the factors suggested above would apply equally to an explanation of the retention of root-internal alveolar geminates in the face of a general elimination of intramorphemic geminates.

2.3. Word Stress

Placement of word stress in Marrithiyel is a matter of no great complexity. Except in cases of reduplication each Marrithiyel word carries only one primary stress. It is my impression that stress is mainly cued by a rise in pitch. Primary stress is normally placed on the first syllable of the stem. Where possible a secondary stress is placed on the second syllable after the primary stress. For non-verbs this is fairly straightforward:

(42)  áwu-wà  ... meat, flesh food + Purposive suffix
kárrilà-kin  ... rock + Erg./Instr. suffix
a-wétyuwarang  ... male red kangaroo
Cl  male red
lA  kangaroo

wati - ø - wínytyani  ... male who's no-good
sCl  3s  no-good
male

Here the prefixes take no stress. Suffixes take no primary stress, but bear secondary stress when attaching to mono-or di-syllabic stems:

(43)  yíkin-kin  ... I + Erg/Instr. suffix
nány-nganáñ  ... you + Source suffix
wati - ø-méri-tyān... male who's a man now
sCl  3s man now
male  (clitic)

The same principle operates in verbs. Verbs are broadly divisible into auxiliaries, a stem and a set of suffixes encoding tense, number etc. (see Ch. 5.). Since verb roots and verb-like morphemes appear in the auxiliary, the post-auxiliary slot is distinguished in this study as the "complex verb stem". Primary stress is placed on the first syllable of this complex verb stem, with secondary stress appearing on the second subsequent syllable:
(44) (a) kani - wūrr - a
  Aux.  die  Past  ... He died.  
(b) kuniny - wūrr - pini - ya
  Aux.  die  2  Past.  ... They (two) died.  
(c) pirringki - wuki - tyân - wa
  Aux.  eat  now  Fut.  ... They will eat it now.  

Some roots which most frequently occur as complex verb stems may also be prefixed to the auxiliary. In this case they are treated, for the purpose of stress placement, like any other prefix, and primary stress is still placed on the initial syllable of a co-occurring complex verb stem:

(45) (a) pirrinimpi - tim - wa
  Aux.  bury  Fut.  They will bury you (sg.).  
(b) tim - pirrinimpi - tyângi - wà
  bury  Aux.  ear  Fut.  They will forget you (sg.).

Some auxiliaries, those which are classified as "simple verbs" in Ch. 5., may function as full verbs in their own right and need not take a complex verb stem. Primary stress is now placed on the first syllable of the auxiliary. Note that no isolatable verbal element within the auxiliary is specifically selected for primary stress; since the auxiliary internal verbal element is not always syllabic this avoids complexities in the stress rule. Thus primary stress falls on the subject morpheme in (46(a)) and on the prefixed verb root in (46(b)). (The reduplication of (46(b)) is discussed further below.)

(46) (a) ngi - ti - ngkî - wa
  1Exc  see  30b  Fut
  Su  
  AUXILIARY

  We(exc.) will see it.

  kâmp - u - nim - a
  1Inc  sit  pl  Past
  Su  
  nF  
  AUXILIARY

  We (inc.) were sitting.

(b) tyâtyâ - ngi - rri - ʔ - ʔ
  want  1s  Su  PreVb  30b  Pres
  nF  
  AUXILIARY

  I want it.
This stress placement is best accounted for by a rule of default: in the absence of a stem able to take stress primary stress is placed word initially. This readily covers 46 above. It also accounts for the case of a monosyllabic verb root reduced to a single consonant by the application of a phonological rule:

(47)  ngu - mu - ø - it - wa
  1s Su  paint  30b  pick  Fut
  AUXILIARY
  → ngu - mu - t - wa  (R1, see 2.4.1.)
  I will pick it up.

(47) has word initial stress: /ngu'-mu-t-wa/. (/it/ is the only verb root recorded so far which appears on the surface as a non-syllabic complex verb stem.)

Complete reduplication of a primary stressed syllable involves also reduplication of stress:

(48)  wák wák  ... crow
  lánapalánpa  ... grasshopper
  kapul-pipi - ya  ... He was smoking (lying down).
  Aux. smoke Past

Secondary stress now appears on the second syllable after the rightmost primary stress:

(49)  lánapalánpa-wa  ... grasshopper+Purposive suff.
  kirrinyikiny-pútýpúty-pini-ya  ... We(excl.,2) were hitting
  Aux. belt up 2 Past  each other.

The reduplicated nominals thus have stress characteristic of two distinct words. Grammatically, however, they behave as single words, the reduplicated segment, for example, being unable to take a separate classifying prefix obligatory for distinct words within an NP. e.g.:

(50)  a - lánapalánpa  a - kapil  ... big grasshopper
  Cl  grass hopper  Cl  big
  1A  1A
  * a - lanpa a - lanpa  a - kapil

Similarly for reduplicated adjectives:

(51)  mi - tyápaty tyápaty  ... a tiny bit of tucker
  Cl  small  small
  nPl
  * mi - tyapaty mi - tyapaty

Only mono- and di-syllabic morphemes have so far been observed to reduplicate and we therefore have no need to consider the possibility of copying secondary stress in reduplication.
There is one circumstance in which primary stress does not fall on the first syllable of a word initial stem. This occurs where there is partial reduplication of a monosyllabic involving an initial open syllable. Primary stress is placed on the second syllable:

(52) mamák  ... good-bye
kakáw  ... come here
kukúk  ... wait

All examples of this type are particles and take no affixes; the exhortatives in (52) are not structured like regular Marrithiyel imperatives. Note that complete reduplication of open monosyllabic morphemes does produce two primary stresses (cf. (48) above.)

There is only one other process by which stress is shifted from the initial syllable of a stem: when a monosyllabic prefix (including auxiliary verbs) attaches to a non-reduplicated disyllabic structure (i.e. a disyllabic stem or a monosyllabic stem with a monosyllabic prefix) primary stress falls on the prefix. Secondary stress now appears in the final syllable.

(53) (a) múwa
   á-muwa } ... bone
   Cl
   la
(b) kátti
   mí-kátti } ... "good tucker"
   Cl
   nFl
(c) k'ny - kurr - 'a ... He hit him.
   Aux. hit Past
(d) ngíl - purr'ity - Ø... I'm fixing it.
   Aux. fix Pres

This process would seem motivated by a desire to maintain, where possible, one primary and one secondary stress per word. This desire, however, is still not sufficient to allow primary stress to be too far displaced from its favoured stem-initial position and to move more than one syllable to the left. A trisyllabic word composed of a disyllabic prefix, or two monosyllabic prefixes, and a monosyllabic stem bears stress in the normal place e.g.:

(54) (a) ki-ling-kurr-Ø
   *ki-ling-kùrr-Ø ... He's hitting me.
   Aux. hit Pres

(b) wati-Ø - kán
   *wáti-Ø - kàn ...This man
   sCl 3s  this/here
   male
Further, if the trisyllabic word already bears two stresses as a result of reduplication no stress shift occurs:

(55) ngín-putypúty-Ø
   *ngín-putypúty-Ø ... I'm going along fishing.
   Aux. fish    Pres

The stress rules are summarised as follows:

(1) Primary stress is placed on the initial syllable of the stem;
(2) In the absence of a syllabic stem primary stress falls on the initial syllable of the word;
(3) A complete reduplication of a syllable with primary stress also takes primary stress;
(4) If primary stress falls on a partially reduplicated monosyllable it is shifted to the second syllable of the stem;
(5) If primary stress falls only on the medial syllable of a trisyllabic word it is shifted to the initial syllable of the word;
(6) Secondary stress is placed on the second syllable after the rightmost primary stress.

The rules are applied after the operation of phonological rules (thus covering 47 above) and in the order:

(1)
(2)
(3)
(4)
(5)
(6)

In the above discussion only a basic notion of the stem has been used and illustrated. While outside the scope of this study Marrithiyel exhibits extensive compounding of both nominal and verbal roots, and also shows incorporation (serialisation) of auxiliary forms within complex verb stems. These phenomena have not been extensively investigated, but data on them so far does indicate that their stress placement conforms to the above rules.

2.4. Morpho-Phonological Processes

Marrithiyel has effectively no widespread phonological processes exemplified throughout the lexicon. With one exception, the reduction of three consonant clusters derived in nominals, described in 2.4.4., the morphophonological processes discussed in this section apply only to verbs and, within verbs, primarily to the auxiliaries. Only one rule, however, high vowel backing (2.4.5.), requires in its formulation an explicit
restriction of its domain of application to verbs. For the other rules (except 2.4.4.) the required environments are simply not satisfied outside of the verb.

It will be seen that the statement of the rules can be kept at a concrete and specific level. The behaviour of consonants is readily handled using only articulatory features, and the four vowels are differentiated by the features \([+Ba], [+Hi]\) i.e.:

\[
\begin{align*}
i [+Hi] & \quad u [+Hi] \\
[-Ba] & \quad [-Ba] \\
{\varepsilon} [-Hi] & \quad -High \\
\end{align*}
\]

The processes described here do therefore not warrent the establishment of a feature matrix any more sophisticated than the articulatory classification of the phoneme inventory given in 2.1.1.

2.4.1. Vowel Cluster Reduction

This rule elides the second vowel of a VV sequence:

(R1) \( V \rightarrow \emptyset / V \)

e.g.:

(56) (a) kunga - impi - pírr - a

AUXILIARY throw Past

\(\rightarrow kungampipirra\) \(\ldots I\) threw it to you (sg.)

(b) ku - iwiny - púp - a

AUXILIARY give/Past put down

\(\rightarrow kuwinypupa\) \(\ldots They\) gave it to them.

(c) ku - puyi - ini - wa

reach Fut

AUXILIARY

\(\rightarrow kupuyiniwa\) \(\ldots They\) will reach him.

As mentioned in 2.2.1. there is one case in which this rule does not apply. This case involves the preposing of /tyatya/, a verb root, to the 2nd sg future form /a/ of the /rrí/ auxiliary verb; no complex verb stem appears. The compound is a verb meaning "want" or "like":

(57) tyatya - ngi - rrí- \(\emptyset - \emptyset\)

want, 1sSu PreVb 30b Pres

like nF

AUXILIARY \(\ldots I\) want/like it.
Such preposing normally results in compounds which, for the purpose of stress placement (see 2.3.) behave as a single word; the preposed verb root has consequently been treated in this study as prefixed. However, when /tyatyá/ precedes the vowel initial second person singular future form of the auxiliary stress is placed as though the verb root and auxiliary were separate words, the initial syllable of each receiving primary stress. Compare the second singular and non-singular forms below:

(58) (a) tyátyá - na - rri - ø - wa
    want, 2nsSu PreVb 3Ob Fut
    like F  AUXILIARY

    You (pl.) will want it.

(b) tyátyá - á - rri - ø - wa
    want, 2sSu PreVb 3Ob Fut
    like F  AUXILIARY

    You (sg.) will want it.

It is best grammatically, since auxiliaries of the /rri/ type (categorised as "pre-verbs" in Ch. 5.) never otherwise stand on their own as single words, and paradigmatically, since the rest of the paradigm has the stress pattern of (58(a)), to treat 58(b) as a single word, listing its VV sequence as an exception to Rl. The aberrant stress indicates that this exception is allowed only if it is treated as much like a sequence across a word boundary as possible.

2.4.2. Auxiliary /i/ Elision

Sequences in auxiliaries which after the application of Rl consist of an initial alveolar non-obstruent segment (i.e. /n/, /l/ or /rr/) followed by /i/, followed by either of the alveolar non-liquids, /n/ or /t/ under certain morpheme boundary conditions have the vowel elided. e.g.:

(59) (a) ngí - n - ini - ya
    1sSu go 3sMasc Past
    nF  L-A
    AUXILIARY

    → nginniya

    I went to him.

(b) ka - ni - ini - ya
    3sSu go 3sMasc Past
    nF  L-A
    AUXILIARY

    → ka-ni-ni-ya  (Rl)
    → kanniya

    He went to him.

Similarly for /l/ and /rr/ initial sequences:
This elision rule applies only to sequences formed with the /(i)ni/ third singular masculine indirect object form and the /(i)ti/ second-third non-singular direct object form. It does not apply for example to the /lin/ and /rrit/ sequences produced with the second singular object/non-singular subject form and the complex verb root /tim/ in 61(a) and (b) below:

(61) (a) ku - li - n - impi - kurr - a
3nsSu PreVb nsSu 2sOb hit Past
nF
AUXILIARY

   → ku-li-n-impi-kurr-a
*ku-l-n-impi-kurr-a

They hit you (sg.).

(b) ka - rri - ø - tim - a
3sSu PreVb 3Ob bury Past
nF
AUXILIARY

   → ka-rri-tim-a
*ka-rr-tim-a

He buried him.

We can account for the non application of the rule in (61) by specifying that /i/ is elided only between an alveolar non-obstruent and a /ti/ or /ni/ sequence which is followed by a morpheme boundary. The only case we now need to exempt from the rule is that of (62) below, where the /niti+/-sequence formed from the subject morpheme followed by the auxiliary verb /ti/ "see" is not reduced:

(62) kini - ti - ngki - ya
2Su see 30b Past
nF
AUXILIARY
You (pl.) saw him.

We cover (62) by adding to the environment of this elision rule a morpheme boundary prior to the sequence. The rule is stated as:

\[(R2) \quad i \rightarrow \emptyset / + \begin{array}{c}
+ \text{Alveolar} \\
- \text{Obstruent}
\end{array} \\
+ \begin{array}{c}
+ \text{Alveolar} \\
- \text{Liquid}
\end{array} \quad \text{C} \quad i + \]

This rule now applies only to the desired object and indirect object forms. There are no other morphemes which will produce the above precise sequence. R2 is ordered after R1 since R1 can be needed to derive the environment necessary for the operation of R2 as stated above. (cf. (59(b)) and (60(b))).

2.4.3. Lateral Assimilation

An optional rule operates to assimilate an apical stop to a preceding lateral across a morpheme boundary. e.g.

\[(63) \quad \text{(a)} \quad \text{kini} - 1 - \text{iti} - \text{kurr} - a
\begin{array}{llll}
2\text{Su} & \text{PreVb} & 2/3\text{ns} & \text{hit, Past}
\end{array}
\text{nF} \quad \text{Ob}
\text{AUXILIARY}
\]

\[\rightarrow \text{kini-l-ti-kurr-a} \quad \text{(R2)}\]

\[\text{optional} \rightarrow \text{kini-l-li-kurr-a}\]

You hit them. (Subject number unmarked.)

\[\text{(b)} \quad \text{ngi} - 1 - \emptyset - \text{tut} - a
\begin{array}{llll}
1\text{ssu} & \text{PreVb} & 3\text{ob} & \text{find Past}
\end{array}
\text{nF}
\text{AUXILIARY}
\]

\[\rightarrow \text{ngi-l-tut-a} \quad \text{optional} \rightarrow \text{ngi-l-lut-a}\]

I found it.

Note that this synchronic lateral assimilation operates in the reverse direction to that proposed for the historic derivation of root-medial geminate laterals from /tl/ sequences (see 2.2.3.) Note also that it applies only across morpheme boundaries. Morpheme internal /lt/ clusters do not optionally appear as geminates:

\[(64) \quad */\text{meltem}/ \rightarrow /\text{mellem/} \quad \ldots \text{sharp.}\]

Thus we state the rule as:

\[(R3) \quad \scriptsize t \rightarrow 1 / 1 \quad \text{optional}\]
R3 is ordered after R2 since R2 is required on occasions to derive the environment for R3 (cf. (63(a)).

2.4.4. Triconsonant Reduction

When the geminate laterals of the /li/ auxiliary verb precede the /iti/ affix the environment for R2 is satisfied. The operation of the rule would produce a three consonant cluster e.g.

(65) pil - li - iti - kurr - wa  
3nsSu PreVb 2/3ns hit, Fut  
F Ob kill

→ pil-li-ti-kurr-wa (R1)  
→ pil-l-ti-kurr-wa (R2)

They will hit you (pl.).

However, the third consonant of this cluster does not appear in surface form and (65) is instead realised as /pillikurrwa/. Similarly with the other geminates in the /li/ auxiliary:

(66) (a) kil - li - iti - kurr - a  
1ExSu PreVb 2/3ns hit, Past  
F Ob kill

→ kil-li-ti-kurr-a (R1)  
→ kil-l-ti-kurr-a (R2)  
→ kil-l-i-kurr-a

We (excl.) hit you (pl.).

(b) ngil - li - iti - kurr - wa  
1ExSu PreVb 2/3ns hit, Fut  
F Ob kill

→ ngil-li-ti-kurr-wa (R1)  
→ ngil-l-ti-kurr-wa (R2)  
→ ngil-l-i-kurr-wa

We (excl.) will hit you (pl.).

What appears to be going on here is that the third consonant of an impermissible triconsonant cluster (i.e. a tri-consonant cluster not having /rr/ as the initial segment - see 2.2.2.2.) is being eliminated. Thus a tentative rule can be written:

(R4) \[ C \rightarrow \emptyset / C_i C_j \]  

Condition: \[ C_i \neq rr \]
However, R3 is not motivated anywhere else in the language. In fact other evidence suggests that where impermissible triconsonant clusters are produced we should analyse the middle rather than the final segment as being deleted. For example, as mentioned in 2.2.2.2., there exists an interrogative suffix meaning "what kind of" which attaches to generics; this suffix has the form /-mpa/ following vowels and /rr/ final generics and the form /-pa/ elsewhere i.e. following consonants other than /rr/. e.g.:

(67) a-wakirr-mpa ... What kind of fish?
    tyanti-mpa ... What kind of spear?
    a-muning-pa ... What kind of bird?
    a-kuwan -pa ... What kind of snake?

Similarly, there is a first inclusive non-subject verbal affix with the shape /-ngki/ after vowels and /-ki/ after consonants; this affix only occurs in certain auxiliary verbs, those which I label as "simple transitives" (see Ch. 5.), and consequently is never found after /rr/.

(68) (a) ki - tin - ki - ya
    3sSu see 1Inc Past
    nF Ob
    AUXILIARY
    He saw us (incl., 2.).

(b) ku - ti - ngki - wa
    3sSu see 1Inc Fut
    F Ob
    AUXILIARY
    He will see us (incl., 2.).

(Note that the variation in the shape of the "see" verb stem here is independently motivated.)

And a second singular non-subject verbal affix has the form /-mpi/ after vowels and /-pi/ elsewhere. Again, this affix is restricted to simple transitives and never appears after /rr/.

(69) (a) ki - tin - pi - ya
    3sSu see 2s Past
    nF hA G
    AUXILIARY
    He looked for you (sg.).

(b) ku - ti - mpi - wa
    3sSu see 2s Fut
    F hA G
    AUXILIARY
    He will look for you (sg.).

Thus we can analyse /-mpa/, /-ngki/ and /-mpi/ as the underlying forms of these affixes and write a rule, R5, contrary to R4, accounting for their post-consonantal shape:
(R5) \[ C \rightarrow \emptyset / C_i \rightarrow C_j \]

\textbf{Condition: } \(C_i \neq \emptyset\)

There are several strategies available in order to deal with the contradiction between R4 and R5. One could, observing that R4 is motivated only by data from triconsonant clusters involving geminates, specify that the third consonant is deleted following a geminate and that the middle consonant is deleted elsewhere. R4/5 below gives this in rule form. (I use the convention that alphabetical subscripts identify consonants whereas numerical subscripts enumerate consonants; thus \(C_{i_2}\) means a sequence of two or more identical consonants i.e. \(C_{i_1}C_{i_1}(C_{i_1})^*\).

(R4/5) \[ C_j \rightarrow \emptyset / \begin{cases} C_{i_2} \\ C_i \end{cases} \rightarrow C_k \]

\textbf{Condition: } \(C_i \neq \emptyset\)

The disjunctive environment of R4/5 can be reduced as in R4/5\(^1\); note that \(\prec\) is an algebraic (numerical) subscript.

(R4/5\(^1\)) \[ C_j \rightarrow \emptyset / C_i \rightarrow C_{2-\prec} \]

\textbf{Condition: } \(C_i \neq \emptyset\)

\(C_i \neq C_j\)

\(\prec \neq 0\)

R4/5\(^1\) would be ordered after R2.

Alternatively, one could observe that in (65) and (66) above R3 (Lateral Assimilation) is able to apply. The resultant forms would be:

\begin{align*}
\text{pil-l-li-kurr-wa} \\
\text{kil-l-li-kurr-a} \\
\text{ngil-l-li-kurr-wa}
\end{align*}

The application of R5 to these forms would then derive the required surface shape. All that is required to make this work is to rig the otherwise optional R3 so that it is obligatory in the above cases, a fairly easy procedure given the limited distribution of geminate laterals. R3 can be modified so that an apical stop assimilates to a preceding lateral obligatorily if that lateral is itself preceded by a lateral, and optionally otherwise. Thus:

\[ (R3) \rightarrow t \prec \text{obligatory} \rightarrow 1 / [\prec \text{lateral}] 1^+ \]

While this modification of R3 has no motivation elsewhere in the language it is perhaps reasonable to conceive of a geminate lateral as a stronger, and therefore more likely obligatory, assimilating environment than a single
lateral. R3\textsuperscript{1} would be ordered after R2 and before R5.

If both the final consonant elision of (65)-(66) and the middle con­sonant elision of (67)-(69) are to be accounted for by phonological rules then the solution offered by R3\textsuperscript{1} and R5, while involving one ad hoc mechanism, is to be preferred to that offered by R4/5 as more plausible and conceptually simpler. Final consonant elision, however, is equally well explained in terms of paradigmatic re-organisation as in terms of phonological processes. There is a strong tendency within the /li/ auxiliary verb paradigm for the forms which do not contain geminates to realise the /-iti/ affix as /-li/ i.e. the optional assimilation of the apical stop to the preceding lateral is normally applied:

\begin{align*}
\text{(70) (a)} & \text{ nga- } 1 \text{ - } iti \text{ - kurr } \text{ - a} \\
\text{lsSu PreVb 2/3ns hit, Past} & \\
\text{nF Ob kill} & \\
\text{AUXILIARY} & \\
\rightarrow & \text{ nga-1-iti-kurr-a} \quad \text{(R2)} \\
\text{optional} & \text{ nga-1-li-kurr-a} \quad \text{(R3\textsuperscript{1})}
\end{align*}

I hit you (pl.).

\begin{align*}
\text{(b)} & \text{ na } - \text{ li } - \text{ iti } - \text{ kurr } - \text{ } \emptyset \\
\text{2nsSu PreVb 2/3ns hit, Imp.} & \\
\text{F Ob kill} & \\
\text{AUXILIARY} & \\
\rightarrow & \text{ na-1-iti-kurr} \quad \text{(R1)} \\
\rightarrow & \text{ na-1-li } -\text{kurr} \quad \text{(R2)} \\
\text{optional} & \text{ na-1-li -kurr} \quad \text{(R3\textsuperscript{1})}
\end{align*}

(You (pl.)) hit them.

The decision, when a three consonant cluster is derived, to completely eliminate the /t/ can be seen as an affirmation of /li/ as the prevalent surface form of the /-iti/ affix in this paradigm, and is possibly a step towards making /li/ the exclusive realisation of the affix, a result which could be simply achieved by the making obligatory of lateral assimilation. Thus I am suggesting that the surface forms given in (66) above should be re-interpreted as containing a /-li/ morpheme i.e.:

\begin{align*}
\text{(71) (a)} & \text{ kil-li-kurr-a} \quad \text{(cf. 66 (a))} \\
\text{(b)} & \text{ ngil-li-kurr-wa} \quad \text{(cf. 66 (b))} \\
\text{(c)} & \text{ pil-li-kurr-wa}
\end{align*}

This reinterpretation in turn would allow for a reanalysis of the final lateral of the subject morpheme as the auxiliary verb stem (the "pre-verb") i.e.:

\begin{align*}
\text{(72) (a)} & \text{ ki-1-li-kurr-a} \\
\text{(b)} & \text{ ngil-1-li-kurr-wa} \\
\text{(c)} & \text{ pi-1-li-kurr-wa}
\end{align*}
It is perhaps highly speculative to suggest that this in turn could prompt a generalisation of /ki/, /ngi/ and /pi/ as the underlying subject morphemes in place of the current /kil/, /ngil/ and /pil/. However, we should note that it appears from the verbal paradigms given in 5.2. that historically all other former /kirri/, /ngirri/ and /pirri/ subject morphemes preceding alveolar initial auxiliary verb stems (/ti(n)/, /ni/ and /rri/) have been reduced to /ki/, /ngi/ and /pi/. (Perhaps through the operation of some historic version of R2.) Only with the /li/ auxiliary has any remnant of the former second syllable of the subject morpheme been retained. The reanalysis which I have speculatively outlined would therefore bring these /li/ auxiliary forms into line with those of other alveolar initial auxiliary verbs.

2.4.5. High Vowel Backing

A rule optionally backing and rounding high front vowels operates only in auxiliaries and complex verb stems. It has a highly specific morphophonemic environment, applying only to /i(ng)/ segments which are both auxiliary or complex verb stem final and not in the initial syllable. Further, it only operates where such segments precede a /wa/ or /[+Peripheral]/ sequence. Thus in (73) and (74) the auxiliary and complex verb stem final high front vowels are backed, but the non-high back vowels are not raised:

(73) (a) a - nyi - ø - purr - wa
   2sSu PreVb 3Ob chop Fut
   F
   AUXILIARY CVS

   optional
   \rightarrow a-nyu-ø-purr-wa

   You (sg.) will chop (the wood).

(b) ngi - nya - ø - put - a
   1sSu PreVb 3Ob get up Past
   nF
   AUXILIARY CVS

   * \rightarrow ngi-nyu-ø-put-a

   I get up.

(74) (a) kupu - 1 - ø - puti - wa
   3sSu PreVb 3Ob rub with Fut
   F paint
   AUXILIARY CVS

   optional \rightarrow kupu-1-ø-putu-wa

   He will rub him with paint.
We (exc.) will chew it.

(75) shows the rule applying to auxiliary final /-ing/ but not /-iny/:

(76) and (77) show the failure of the rule to apply to /i(ng)/ segments belonging to the initial syllable of auxiliaries and complex verb stems. Note that (77) shows both a stressed (in (77(a))) and unstressed (in 77(b))) verb stem failing to have its initial vowel backed:

(b) ngarr - ki - ny - nityu - wa
   LEoSu  sit  nsSu  chew  Fut
   F
   AUXILIARY  CVS

* ----> ngarr-ki-ny-nityu-wa

We (exc.) will chew it.

(75) (a) ki - l - ing - puti - ya
   3sSu  PreVb  1sOb  rub with Past
   nF  paint
   AUXILIARY  CVS

optional ----> ki-l-ung-puti-ya

He rubbed me with paint.

(b) ku - li - iwiny - puti - ya
   3nsSu  PreVb  3ns  rub with Past
   nF  Refl  paint
   AUXILIARY  CVS

* ----> ku-li-wuny-puti-ya

They rubbed themselves with paint.

They will grab me.
"(You (sg.) play (the didgerido.)!"

/i(ng)/ segments in this morphological environment must be followed by a /w\[+/Ba\] / or a /C\[+/Peripheral\] sequence.

Thus the verb stems and verbal suffixes in (78) can trigger the rule, but not those in (79):

(78) wa ... burn the hair off
wuki ... eat
ngurang ... converse
mutying ... listen
kurr ... hit, kill
puti ... rub with paint
wa ... Future affix

(79) wewe ... vomit
winy ... whistle
ngal ... 3rd sg. Fem Benefactive
mel ... watch
kit ... cut
pap ... fuck

In order to describe this vowel backing process in rule form I shall have to depict the boundary between auxiliary and complex verb stem, and between complex verb stem and verbal suffixes, i.e. the boundary which marks out the complex verb stem, as distinct from other morpheme boundaries in the language. This boundary is represented as #-. The backing of /i/ takes place only in the environment of this boundary. It occurs, for example, in the auxiliary of (80(a)), but not in the homophonous class marker of (80(b)):

(80) (a) wa - ti - ŋ pu ŋ
2sSu see 30b pour Imp.
F out
AUXILIARY CVS

optional \(\rightarrow\) wa-tu-pu

(You (sg.) ) pour it out.

(b) wati - ŋ - mulirity
sCl 3s cheeky
male

* \(\rightarrow\) watu-ŋ-mulirity

He's a cheeky fellow.
And backing does not take place for example when the /pini/ verbal number suffix precedes a /wa/ sequence:

(81) pi - ni - ny putin pini - wa

They (2) will be sleepy.

In the absence of a complex verb stem a verbal suffix can trigger backing in an auxiliary /i/ vowel e.g.:

(82) ngi pi - i - t - t - wa

I will do it.

Since the auxiliary in fact functions as the main verb when no complex verb stem is present it is reasonable to suppose that for the purposes of boundary marking it is treated as a complex verb. Thus (82) is represented as (83) below, and the rule applies as usual.

(83) t ngi-pi-Ø wa

This predicts of course that an auxiliary with an initial / / or /wa/ sequence which was functioning as a main verb would produce raising in a preceding /i(ng)/ which was not in the initial syllable of the prefix. However, no auxiliary prefix which satisfies these structural conditions has yet been recorded.

Two rules for this process can now be written.

optional

(84) i u / (ng) t [C +Peripheral] u

Employing the feature classification of glides as [- Cons], (84) and (85) can be combined:

R6 i [optional] u / (ng) t [C +Peripheral] V

Condition: /i/ does not follow #(C) or +(#(C)

Since the prior application of R6 potentially blocks the application of R2 in circumstances where R2 must apply, R6 must be ordered after R2.
e.g. In (86) R6 is applied before R2; R2 cannot now operate to derive the desired (optional) surface form /kini-l-tu-kurr-a/. Where R6 follows R2, however, as in (87), the correct surface options are produced.

(86)  
\[\begin{align*}  
\text{kini} &- 1 - \text{iti} - \text{kurr} - \ a \\
\text{2Su} &\quad \text{PreVb} \quad 2/3\text{ns} \quad \text{hit,} \quad \text{Past} \\
\text{nF} &\quad \text{Ob} \quad \text{kill}  
\end{align*}\]

\(\text{optional} \rightarrow \text{kini-l-itu-kurr-a} \)  
\(\rightarrow \text{kini-l-itu-kurr-a} \)

(R6)  
(R2)

(87)  
\[\begin{align*}  
\text{kini} &- 1 - \text{iti} - \text{kurr} - \ a \\
\text{2Su} &\quad \text{PreVb} \quad 2/3\text{ns} \quad \text{hit,} \quad \text{Past} \\
\text{nF} &\quad \text{Ob} \quad \text{kill}  
\end{align*}\]

\(\rightarrow \text{kini-l-ti-kurr-a} \)  
\(\text{optional} \rightarrow \text{kini-l-tu-kurr-a} \)

(R2)  
(R6)

You hit them. (Subject Number unmarked).
3.1. Case Inflections

Participant roles are coded on nominals in Marrithiyel by a set of case inflections which suffix to the final constituent of an NP. The inflections, and their broad functions, are given in (1); the inflections show no allomorphic variation.

(1) kin ... Ergative - Transitive Instrumental
    weti ... Non-transitive Instrumental
    wa ... Purposive
    nganan ... Source (Ablative)
    nanga ... Locative - Allative
    than ... Allative

NPs operating as intransitive subject, direct object, indirect object and the subjects or complements of equationals take no case inflection. In addition the /kin/,/nanga/ and /than/ suffixes do not always appear on NPs in the roles which they code. The absence of case marking on an NP is therefore not particularly significant, and no Ø affix will be marked on NPs in the data presented in this study.

(a) /kin/

/kin/ functions primarily as an ergative-instrumental marker. As an ergative marker it can only attach to subjects of formally transitive verbs. Formal transitivity is considered in detail in 5.1.3. For the moment it can be stated that formal transitivity or intransitivity does not imply the co-occurrence of an object-like NP. Thus /kin/ is acceptable with the subject of the formally transitive verb in (2(a)), for which I have been able to discover no object NP, but unacceptable with the subject of the formally intransitive verb in (2(b)), for which an object-like NP is available:

(2) (a) thawurr - kin ku - mun - Ø - thathal - Ø
tree ERG 3sSu paint 30b grow Pres
nF

The tree is growing.

(b) meri yuwa - (*kin) ka - ni - tyaktyak - Ø
man that ERG 3sSu go light a Pres
nF fire

That man is lighting a fire.
Further, formally transitive verbs obligatorily select either an affix marking non-reflexive direct object or an affix marking what I label in 5.1.3. as higher animate goal. /kin/ cannot attach to the subject NP of a formally transitive verb which takes a higher animate goal affix:

(3) (a) yeri tyapaty - kin ki - tin - ti - ya
    child small ERG 3sSu see 2/3nsOb Past
    The small child saw you/them (3 or more).

    (b) yeri tyapaty - (*kin) ki - tin - iwiny - a
    child small ERG 3sSu see 3ns Past
    The small child looked for them (3 or more).

Reflexives are verbally coded with higher animate goal affixes and their subjects similarly do not take /kin/.

(4) muku - (*kin) ku - ti - iwiny - a muri - weti - Ø
    woman ERG 3nsSu see 3ns Past hand 3ns 3+
    The (3 or more) women saw themselves.

As I shall explain in Chapter 5, higher animate goal affixing (including that for reflexive function) is associated with reduced transitivity. The ergative /kin/ is thus only available for subjects of highly transitive actions.

/kin/ is not obligatory in the conditions in which it can occur, and its appearance is largely confined to two specific sets of circumstances. Firstly, it suffixes to transitive subjects whose role as agents is semantically marked. Inanimates, for example, which are inherently less likely than animates to be the agents of a transitive action, normally take the suffix when subject of a transitive verb:

(5) thawurr - kin ku - nyi - ning - perri - wut - pini - ya
    tree ERG 3nsSu PreVb IsOb foot walk 2 Past
    The 2 logs tripped me.
    I tripped on the two logs.

In the same way, lower animates initiating transitive actions normally controlled by humans are marked:
(6) a - wurrumpun - kin ka - rri - ing - wil - a ku - nga - wul - a Cl crocodile ERG 3sSu PreVb 1sOb force Past 1sSu stand re- Past
1A nF nF turn

The crocodile forced me to come back.

There appears to be no more detailed classification of NPs in terms of their likelihood to be transitive agents, and therefore no rigorous rules stating which types of subject-object combination favour the use of /kin/. The semantic markedness of a particular subject with a particular verb is largely determined by the participant types for which that verb most frequently sub-categorises. Thus the subject of (7), although human and highly likely generally to be an agent, is culturally determined as marked with this verb, which encodes what is normally a male activity; /kin/ is suffixed:

(7) muku - kin ki - ny - Ø - tyip - a a - mati
woman ERG 3sSu PreVb 3Ob spear Past.Cl barramundi nF 1A

The woman speared the barramundi.

/kin/ also normally appears when the role of the participant as transitive agent is contextually marked or unexpected. It attaches in (8(a)) when the mistaken assumptions of participant roles of the previous discourse are corrected, and in (8(b)), where the agent's identity and role are highly significant in the narrative.

(8) (a) wuy wati - Ø - pintipinti - kin ki - tin - Ø - a nguwat
no sc1 3s old man ERG 3sSu see 3Ob Past ghost
male nF

No, it was the old man who saw the ghost.

(b) yu tha - katti mana yikin - kin yilyil ku - ti - ngki - ya
yes Cl good brother ls ERG straight 3ns see 3Ob Past thing =my

Yes it's true (because) my (3 or more) brothers really saw it.

/kin/ thus functions to emphasize the aSetterhood of a particular entity, and the NPs to which it suffixes are in fact usually translated by informants as taking emphatic stress. (I have not as yet been able to identify any corresponding distinctive stress pattern in the Marrithiyel data.) Note on this point that there is an affix /kin/ which operates as an emphatic for deictics (see 6.2.):
(9) wati - ø - meri ka - pul - ø yuwa - kin
sCl 3s man 3sSu lie Pres there EMPH

That man's lying there.

The apparently shared emphatic function suggests an historical relationship between the deictic and nominal /kin/.

The second circumstance which favours the use of /kin/ is the displacement of the subject from its usual position. Marrithiyel word order is broadly SV(O) or (S)OV. When a transitive subject is ordered after an object NP the violation of the normal sequence is usually marked by /kin/ suffixation. As shown in (10(a)) and (b), where the verbal bound pronouns fail to clarify participant roles, it is often only the option of /kin/ attachment which makes this violation possible, and prevents interpretation according to the normal role sequence.

(10) (a) wati - ø - katti wati - ø - winytyani ki - ny - ø - tyip - a
sCl 3s good sCl 3s no good 3sSu PreVb 3Ob spear Past
male male nF

The good man speared the bad man.

(b) wati - ø - katti wati - ø - winytyani - kin
sCl 3s good sCl 3s no good ERG
male male

ki - ny - ø - tyip - a
3sSu PreVb 3Ob spear Past

The bad man speared the good man.

/kin/ also commonly appears when, in the absence of an overt object NP, the transitive subject NP is placed post-verbally.

(11) pirri - nyi - ngki - kit - nguri - pini - wa wamangkal - kin
3nsSu PreVb 3Ob cut penis 2 Fut doctor ERG

The two doctors will circumcise him.

It is not currently clear what factors themselves are responsible for disruption of normal word order.

/kin/ also functions as a transitive instrumental marker, i.e. suffixing to NPs denoting any sort of item employed by a transitive subject to perform an action directly on an object. An instrumental NP marked with /kin/ can co-occur with a transitive subject NP marked with /kin/:

(12) titha yikin - kin ki - tin - ø - kirr - thami - ya karrila - kin
father 1s ERG 3sSu see 3Ob sharpen point Past rock INST
=my nF

It was my father who sharpened the point with a rock.
Instrumental /kin/ is allowed to appear under the same general conditions as ergative /kin/ i.e. when denoting the instrument employed by the subject of a formally transitive verb taking direct object affixes. Additionally it can encode the instrument of a reflexive action, as in (13). It cannot, however, suffix to the NP denoting the instrument employed by the subject of a formally transitive verb taking higher animate goal affixes in other than reflexive function; compare (14(a)) and (b).

(13) yeri tyapaty ki - ny - ing - kit - a muri - ngiya nayf - kin
child small 3sSu PreVB 3sFem cut Past hand 3sFem knife INST nF Refl Reflexive

The small child cut herself with a knife.

(14) (a) weti - pini ku - mu - ning - tutu - pini - ya watyan - kin
3ns 2 3nsSu paint lsOb hunt, 2 Past dog INST nF track

They (2) hunted me with (=using) dogs.

(b) *weti - pini ku - ti - ningin - pini - ya watyan - kin
3ns 2 3nsSu see ls 2 Past dog INST nF hA G

They (2) looked for me with dogs.

And /kin/ can never mark the instrument of an intransitive action:

(15) *ka - yirr - warrat - Ø thawurr - kin
3sSu go along walk Pres tree, INST nF stick

He's walking along with (the aid of) a stick.

Instrumental NPs normally occur post-verbally, in which position the instrumental suffix is never omitted. However, the instrumental NP is sometimes placed immediately before the verb and the case inflection deleted:

(16) titha yikin - (kin) tyanti ki - ny - Ø - kurr - a
father ls ERG spear 3sSu PreVB 30b hit, Past nF kill

My father killed him with a spear.

In the absence of a subject NP, and where the bound pronouns on the verb fail to denote a distinct subject, the uninflected pre-verbal instrumental is potentially interpretable as subject. Thus we have the two readings of (17):
While many languages might treat the difference between these two readings as rather minor and inconsequential, Marrithiyel appears to have stricter controls on accessibility to (transitive) subjecthood (see 5.1.3.2.) A typically inanimate instrumental entity which is allowed to become a transitive subject is semantically marked in its agentive role; as discussed above, the /kin/ ergative marker is therefore usually suffixed. (Thus (18(b)) has the same structure as (5) above.) But, given the controls on subjecthood, /kin/ suffixation provides for a refinement in meaning of the second reading of (17):

Note that semantically marked agents, as in (18(b)), appear in the normal subject position. Thus the /tyanti-kin/ of (18(a)) is read as an instrumental NP and not as a marked post-verbal subject of the type shown in (11) above. Since pre-verbal /kin/ marks instruments as agents it will be interesting to see whether, correspondingly, post-verbal /kin/ suffixation gives more of an instrumental type of reading to agents, i.e. whether it perhaps has some of the semantic consequences of the "by" phrasing of the English passive.
with or affect on an object. (14(b)) and (15) above both become acceptable if /wetii/ is substituted for /kin/. Similarly:

(19) (a) kati - Ø ki - ni - ny - a tyilak - nanga nantu -
1Excl 3+ 1ExSc go SuNo Past Tyilak LOC-ALL horse
nF

We (excl., 3 or more) went to Tyilak by horse.

(b) nang yuwa tyangi - weti ka - ni - ingin - Ø
3sMasc that ear INST 3sSu go ls Pres
nF hA G

That fellow knows me.

(c) /wa/

/wa/, which I have labelled as the "purposive" suffix, and which is homophonous with the verbal future tense suffix, denotes the entity towards which an action is directed or on behalf of which the action is performed.

(20) ngi - nyarr - a mityin - nanga muku yikin - wa
lsSu go Past mission LOC-ALL woman ls PURP
nF along =my

{I went to the mission for my wife (to get her, do something to her).
I went to the mission for my wife (to get/see/do something for her).
I went to the mission for my wife (on her behalf, instead of her).}

(21) (a) tyanti ngu - mun - Ø - tuty - a mana yikin - wa
spear lsSu paint 3Ob pick Past brother ls PURP
nF up =my

{I picked up some spears for my brother (to spear him with).
I picked up some spears for my brother (to give them to him).
I picked up some spears for my brother (on his behalf, instead of him).}

(b) ngi - ny - Ø - kurr - a awu - wa
lsSu PreVb 3Ob hit, Past meat PURP
nF kill

{I killed him for meat (in order to get his meat).
I killed it for meat (to eat it).}

Note that entities towards which or on behalf of which intransitive cognitive-emotional actions are directed or performed are marked by /wa/:

(22) (a) masi ka - ni - tyi - Ø mana yikin - wa / nguwat - tyan
belly 3sSu go cry Pres brother ls PURP ghost now
nF =my

My belly is crying out for my brother - he's dead now.

(b) nany tyangi - weti kini - n - Ø yeri kan - wa
2s ear INST 2sSu go Pres child this PURP
nF

Do you (sg.) know this child?
/wa/ exhibits the same function in attaching to the interrogative
/ninytya/ "what" to form an interrogative "why":

(23) (a) ninytya  kini - ny - Ø - tyip - a
    what       2sSu PreVb 3Ob spear Past
    nF

    What did you (sg.) spear ?

(b) ninytya - wa  kini - ny - Ø - tyip - a
    what      PURP 2sSu PreVb 3Ob spear Past
    nF

    Why did you spear it ? (i.e. for what purpose)

NPs marked with /wa/ can be cross-referenced by one of two differ­
ten sets of affixes occupying separate positions in the verb; the
broad function of /wa/ in attaching to NPs thus becomes differentiat­
ed by verbal coding. This is discussed in Chapter 5.

(d) /nganan/

/nganan/ is the nominal source inflection. It can function as
an ablative, coding the point or direction of origin of a particular
action.

(24) (a) ka - ni - ya  tyapana - nganan
    3sSu go Past  Alligator    SCE
    nF       Point

    He came from Alligator Point.

(b) awu ku - mun - Ø - it - a  ngatta - nganan
    meat 3sSu paint 3Ob pick Past  house    SCE
    nF       up

    He picked up the meat from the house.

(c) nitin tuwarr - nganan  ka - yirr - a
    country full   SCE   3sSu go Past
    (of food)      nF   along

    He went away from the camp.

It also marks the animate entity from which a directed action origin­
ates:

(25) tyanti  ngu - mun - Ø - tuty - a  titha yikin - nganan
    spear  1sSu paint 3Ob pick Past father 1s  SCE
    nF          up  =my

    I picked up some spears from my father.

/nganan/ further specifies the material source of an item or, more
abstractly, the source of a particular state or action:
(26) (a) yeri kunytyunguny yuwa mawuny - nganan
Cl boomerang that ironwood SCE
weapon
That boomerang is made of ironwood.
(b) wati - ng - winytyani wuti winytyani - nganan
sCl ls no good water no good SCE
male
I'm no good, because of the grog.
(c) pimut - nganan ka - ni - wurr - a
flu SCE 3sSu go die Past
nF
He died from flu.

Some constraints on the use of /nganan/ in the broadly causal sense
of (26(b)) and (c) are discussed in 5.1.3.3.

/nganan/, like /wa/, attaches to the interrogative /ninytya/:

(27) (a) ninytya - nganan . kini - ny - Ø - tyip - a
what SCE 2sSu PreVb 30b spear Past
nF
Why did you spear it? (i.e. what was the source or motiv­
ation of the action?)
(b) ninytya - nganan yeri kunytyunguny kini - rr - Ø - purrity -a
what SCE Cl boomerang 2sSu PreVb 30b make Pas
weapon nF
Why did you make the boomerang? From what did you make the boomerang?

(e) /nanga/
/nanga/ is the general locative, coding location at, in or on a
particular place:

(28) (a) a - wakirr wuti - nanga
Cl fish water LOC-ALL
1A
There's a fish in the water.
(b) muku ngatta - nanga ku - si - Ø
woman house LOC-ALL 3sSu sit Pres
nF
A woman's sitting in the house.
(c) a - wetyuwurang ku - si - Ø nginyawul - nanga
Cl male red 3sSu sit Pres shade of LOC-ALL
1A kangaroo nF tree
A kangaroo's sitting in the shade of the tree.
(d) ngi - tin - Ø - tyin - a
  1sSu see 30b fall, Past Tyilak LOC-ALL
  nF  be born

I was born at Tyilak.

(e) a - winngal perri - nanga ku - wa - ini - Ø
  Cl mosquito foot LOC-ALL 3sSu stand 3sMasc Pres
  1A  nF  L-A

There's a mosquito (standing) on his foot.

/nanga/ is also used as an allative, expressing motion to a particular point:

(29) ku - wa - palpaty - a mityin - nanga
    3sSu stand run Past mission LOC-ALL
    nF

He ran to the mission.

Use of the /nanga/ allative implies that the named destination is reached and entered into or onto. To express an allative corresponding to English "towards" /nanga/ is supplemented with, or replaced by, a further suffix /than/.

(30) ku - wa - palpaty - a mityin - (nanga) - than
    3sSu stand run Past mission LOC-ALL ALL
    nF

He ran towards the mission.

(31)(a) nityi - ngani ngumpu - n - nim - wa peterr - (nanga) - than
    night body 1Inc Su go 3+ Fut river LOC-ALL ALL
    =morning, F

Tomorrow we (incl, 3 or more) will go towards the river.
Tomorrow we (incl, 3 or more) will go to the river (but not go in).

(b) nityi - ngani ngumpu - n - nim - wa peterr - nanga
    night body 1Inc Su go 3+ Fut river LOC-ALL
    nF

Tomorrow we (incl, 3 or more) will go to the river (and go in).

Note that /than/ also appears as a complex verb stem, in which function it is not restricted to non-arriving motion:

(32) kati - Ø      ngi - rri - ininy - than - wa nityi
    1Excl 3+ 1ExclSu PreVb 2ns move to Fut night
    F  L-A

We (excl., 3 or more) are coming to you (sg.) tonight.

Both /nanga/ and /than/ are omitted from locative-allative NPs whose role is contextually clear. Such deletion does not occur with /wa/
and /nganan/.

It should be noted here that many spatial concepts are not expressed with the above suffixes. Body part names are used instead to specify the orientation of an action. /tiyerr/ "teeth" and /masi/ "belly" are particularly important in this respect, and the opposition they establish in the examples below will be seen later (see 5.1.4.) to play a role in verb categorisation.

(33) (a) ka - ni - wut - Ø peterr tiyerr
    3sSu go walk Pres river teeth
    nF

    He's walking along the river bank.

(b) ka - ni - wut - Ø peterr masi nginytyi
    3sSu go walk Pres river belly one
    nF

    He's walking across the river (i.e. fording it).

Note also that Marrithiyel has no genitive affix. The mechanism for encoding possession is considered in the discussion of free form pronouns in 4.4.

3.2. Noun Classes

Marrithiyel NPs can be marked for class membership. There are four major classes: humans; animals (and edible body parts); trees and plants having edible produce, and their products; and a class consisting of non-edible trees and bushes, honey and tobacco, and particular "things" not belonging to the other categories. There are two relatively minor classes marking certain hand held weapons and implements. NPs not selected as belonging to one of these categories take no class markers.

Two basic procedures are used to indicate class membership: the preposing of a generic noun to the NP, and the attachment of prefixes to NP constituents. These are discussed below for each class.

3.2.1. Humans

The human generics are /meri/ "man, men" and /muku/ "woman, women"; as indicated, they are unmarked for number. They are used only to
refer to post-pubescent men or women; in the case of males this strongly implies that they have been circumcised, and /meri/ is in fact often used with this more specific meaning:

(34) titha yikin  ampi  meri
father  is=  my  NEG  man

My father's not a man.
= My father hasn't been circumcised.

/yeri/, homophonous with the weapons class marker, is the noun for "(pubescent or pre-pubescent) child(ren)"; it does not co-occur with the generics or class prefixes. Other specific terms, incorporating the human class prefixes, but not following /meri/ or /muku/, mark non-mature children as human and, in the singular, as male or female.

Note that kinship terms, among which /yeri/ appears to be included, never take class marking, either by generic or prefix.

The human class prefixes vary in form according to number (singular vs. non-singular) and according to gender. Unlike the other class prefixes they take person and (non-singular) number inflections. These generics and prefixes apply only to humans, and not to the whole category of higher animates which is important elsewhere in the language (see 4.1. and 5.1.3.1.) Dingoes and non-human spirits, for example, which are verbally cross-referenced as higher animates, do not take the human class markers.

(a) **Singular Human Class Markers**

The singular human class prefixes are /wati/ "male" and /ngungku/ "female". Each of these is followed by a person inflection, as given in the table below. Note that the person inflections are identical to the singular bound direct object pronouns (see 5.2.5.)

(35) | Person | Prefixes |
|-------|---------|
| 1st   | Masc: wati - ng  
|       | Fem: ngungku- ng |
| 2nd   | Masc: wati - ny  
|       | Fem: ngungku- ny |
| 3rd   | Masc: wati - 0  
|       | Fem: ngungku- 0 |

A closed set of nouns are obligatorily prefixed in the singular with /wati/ or /ngungku/. These nouns denote the status, as defined in terms of body processes, or stage of life of the referent e.g.

(36) /wati/ Prefixed  
|   | Pinnedpinti  ... old man  
|   | ngulpak  ... young boy  

/ngungku/ Prefixed  
|   | kunikuni  ... old woman  
|   | tyipel  ... female adolescent  
|   | virgin
These nouns already have their gender specified as an essential part of their meaning. Use of the prefix constitutes a second and redundant gender marking.

The generics /meri/ and /muku/ in the singular optionally take the prefixes.

/wati/ and /ngungku/ also derive human nouns. They prefix, for example, to nouns denoting sexually specific body processes or parts:

(37) tyalmang ... foreskin
    wati-Ø-tyalmang ... uncircumcised male
marapat ... moustache
wati-Ø-marapat ... adolescent male
pityi ... menstrual blood
ngungku-Ø-pityi ... woman who menstruates
yeri ngalpu ... many children
ngungku-Ø-yeri-ngalpu ... woman with many children

They cannot, however, prefix to body processes or parts which are not unique to one of the sexes:

(38) wiyusu ... urine
    *wati-Ø-wiyusu
    *ngungku-Ø-wiyusu
thimi ... a boil
    *wati-Ø-thimi
    *ngungku-Ø-thimi
welamirr ... pubic hair
    *wati-Ø-welamirr
    *ngungku-Ø-welamirr

But they do prefix freely to adjectives, numerals and deictics to derive nouns:

(39) katti ... good
    wati -Ø-katti ... a good male
    ngungku-Ø-katti ... a good female
tyapaty ... small
    wati -Ø-tyapaty ... male child/baby
    ngungku-Ø-tyapaty ... female child/baby
nginytyi ... one
    wati -Ø-nginytyi ... one male
    ngungku-Ø-nginytyi ... one female
kan ... this
    wati -Ø-kan ... this male
    ngungku-Ø-kan ... this female

Where semantically appropriate, that is, when denoting post-pubescent males or females, the nouns illustrated in (36), (37) and (39) can be preceded by a human generic, itself optionally prefixed. For the derived human nouns, as in (37) and (39), the preposed generic makes class prefixing optional:

(40) (a) ((wati-Ø-)meri) wati-Ø-pintipinti ... the old man
As a general rule, if the prefix appears on the generic it is copied on the following specific noun; in fact, we can state as a general rule that the prefix is copied on all NP constituents which follow it. Thus:

(41) (a) wati - ʊ - pintipinti  wati - ʊ - kapil  wati - ʊ - yuwa
     sCl  3s old man  sCl  3s big  sCl  3s that
     male       male

That big old man fell over.

(42) (a) ngungku- ʊ - muku  ki - tin - ʊ - tyin - a
     sCl  3s woman  ERG  3sSu see  30b fall, Past
     female

The woman speared it for her little boy.

(b) wati - ng - katti - kin  ngi - ny - ʊ - tyip - pal - a
     sCl  1s good  ERG  1sSu PreVb 30b spear 2s Past
     male

I, a good man, speared fish for you, an adolescent girl.

However, while (42(b)) is acceptable, clauses of its type are rarely produced spontaneously by informants; first and second person NPs
are rarely inflected for case roles and in fact rarely appear as clause level participants in the same way as third person NPs. The preferred structuring of (42(b)) is, for example, as below:

(43) wati-ng-katti / yikin-kin  
   sCl 1s good  
   1s ERG 1sSu PreVb 3Ob spear 2s Past  
   male  
   a - wakirr nany - wa / ngungku-ny-tyipel  
   Cl fish 2s PURP sCl 2s virgin (adolescent)  
   1A female

Class prefixed nouns can have sentential status:

(44) (a) wati-ng-katti  
   sCl 1s good  
   male  
   I'm a man. (=I've been circumcised.)  

(b) ngungku-ny-winytyani  
   sCl 2s no good  
   female  
   You (sg.) are no good. / You're a bad woman.

(c) ngungku-Ø-yeri-ngalpu  
   sCl 3s child many  
   female  
   She's got a lot of children.

In the absence of the class prefix a second NP, in this case a free pronoun, is required to mark the subject and to produce a grammatical equational clause:

(45) (a) yikin meri  
   1s man  
   ... I'm a man

(b) nany (muku) katti  
   2s woman good  
   .... You (sg.) are a good woman.

(c) ngiya yeri-ngalpu....  
   3sFem child many  
   She's got a lot of children.

Given this evidence we can interpret (43) above as a sequence of three clauses: the distinct intonation breaks, marked with a slash in (43), support this interpretation. Most first and second person prefixed human NPs in Marrithiyel occur as in (43), adjoined to a clause whose participants they provide information about, and if they are to be ultimately analysed as verbal in nature, then we must deal with the question of why the third person prefixed human NPs are allowed generally greater flexibility in embedding in a main clause.

The answer to this question, at least in part, may come from an examination of the information structuring of Marrithiyel NPs. NPs with
strings of modifiers are accepted by informants; in practice, however, informants only occasionally produce NPs with more than two modifiers, and more commonly only one modifier is found. Even the presence of a second modifier is usually marked. For singular human NPs /wati/ and /ngungku/ prefixing operates to frame and place in apposition the second modifier. Consider, for example, the phrase "the good tall man"; the principles outlined in this section allow for a good deal of choice in structuring this phrase in Marrithiyl. e.g.:

(46) (a) (meri) wati-Ø-malika wati-Ø-katti
  man   scl 3s tall  scl 3s good
  male  male

(b) meri malika wati-Ø-katti

(c) meri katti wati-Ø-malika

(d) wati-Ø-meri wati-Ø-katti wati-Ø-malika

(e) meri katti malika

The good tall man.

Of these possibilities (46(d)) and (e) are rarely found for NPs functioning and potentially inflected as participants in the clause. (46(a)-(c)) represents the more usual structuring, and the choice between them seems to be determined by which information is assumed as given or backgrounded and which is regarded as newer, or foregrounded, and consequently set aside morphologically and, to a degree, intonationally, by the use of the prefix. (46(b)), for example, arose in a discussion about a big man; prior to its utterance no value judgement had been made about him. (46(c)), on the other hand, arose in a narrative in which both attributes of the man had clearly been outlined; the narrative, however, went on to describe certain feats achieved by the man by virtue of his height (viz., being able to climb and collect eggs from trees whose lower branches could not be reached by shorter people.) In both cases the human prefix selects and emphasises new and/or significant information.

Clearly, more detailed investigation into this function of class prefixing is required. In particular it remains to be seen whether the obligatory affixing of /wati/ and /ngungku/ (cf. (36) above) is an extension of this function. And syntactically it has to be decided whether the prefixed adjectives of (46) above are best analysed as modifiers class prefixed in agreement with the head noun, apposed derived NPs, or embedded equational clauses. In addition, the associated suggestion that Marrithiyl NPs carry, in terms of the limits on modifier number,
a limited information load must be rigorously examined. But if these points do hold then the preference for adjoining first and second person human NPs to, rather than incorporating them in, a main clause could be explained by the high markedness of specifying information about a first or second person participant. That is, the first or second prefix takes an overt morphological marker, whereas the third person is unmarked. Also, attributes of a first or second participant are more an assumed part of the given situation, and less useful in tracking referents, than attributes of a third person participant. Thus the foregrounding of information about a first or second person participant may be considered to add so markedly to the information load of an NP that it is preferred to assign the information to a separate equational structure.

(b) Non Singular Human Class Markers

The non-singular human class prefixes are /tiny/ "human", /ma/ "male" and /ŋmuku/ "female".

/tiny/ prefixed elements have the structure:

(47) Person Marker + /tiny/ + HEAD + Number Marker

As we shall see later (in Chapter 5) this is a verbal structure. In contrast to the singular prefixes the /tiny/ non-singualrs take person inflections identical with the bound subject forms of certain verb classes. And they take number inflections identical with those found on verbs and pronouns. The affixes are:

(48)  

<table>
<thead>
<tr>
<th>Person</th>
<th>Dual</th>
<th>Number</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Inc.</td>
<td>kumpu-</td>
<td>Ø</td>
<td>-nim(pini)</td>
</tr>
<tr>
<td>1st Exc.</td>
<td>ki-</td>
<td>}</td>
<td>(nimpini)</td>
</tr>
<tr>
<td>2nd</td>
<td>kini-</td>
<td>}</td>
<td>pini</td>
</tr>
<tr>
<td>3rd</td>
<td>ku-</td>
<td>}</td>
<td></td>
</tr>
</tbody>
</table>

(The nature of this number system is considered in 4.5.)

As with the singular prefixes, /tiny/ is affixed to the set of nouns denoting status or stage of life (see (36) above) and may derive human NPs from sexually specific body process or part nouns (as in (37)):

(49) ku - tiny - typel - pini ... The two adolescent girls
3ns nsCl virgin 2 human (adolescent)

kumpu - tiny - marapat - nim ... We (inc., 3 or more) adolescent
1Inc nsCl moustache 3+ human
Nouns such as /pintipinti/ and /tyipel/ are obligatorily prefixed in the non-singular as well as in the singular; if /tiny/ is not affixed they must take /ma/ or /muku/ in the non-singular. /muku/ and /meri/ are optionally /tiny/ prefixed in the non-singular.

Again as with the singulars, human class prefixing does not apply to body process or part nouns which are not unique to one of the sexes:

(50) wiyuşi ... urine
*ku-tiny-wiyuşi-∅
welamirr ... pubic hair
*ku-tiny-welamirr-∅

All /tiny/ prefixed elements can be preceded by one of the generics /meri/ or /muku/; the presence of a generic makes /tiny/ prefixing optional for derived human NPs.

(51) (a) nati - ∅ muku yeri - ngalpu
2ns 3+ woman child many
You (3 or more) children with many children.

(b) meri (ku - tiny -)marapat (- ∅)
man 3ns nsCl moustache 3+
human
The (3 or more) adolescent males.

The deletion of /tiny/ prefixing in first and second person requires the insertion of a free pronoun to indicate person of referent, as in (51(a)). In third person the removal of /tiny/ results in loss of number distinction; /meri marapat/ can be interpreted as either derived from the full expansion of (51(b)) or from the singular structure of the type illustrated in (40(c)). It is therefore unmarked for number.

/tiny/ prefixing and generic preposing also apply to pronouns and adjectives. However, by an apparent manifestation of the same principle which restricts /tiny/ to sexually specific body processes and parts, /tiny/ cannot attach to pronouns and adjectives when gender is not explicitly coded somewhere within the NP. (52(a)) is ungrammatical for this reason, but becomes acceptable with the preposing of /muku/ or /meri/ in (52(c)).

(52) (a)* ku - tiny - kapil - ∅ ku - ni - ny - ∅ kan
3ns nsCl big 3+ 3nsSu go SuNo Pres here
human nF
The big people are coming here.

(b) weti - ∅ kapil ku - ni - ny - ∅ kan
3ns 3+ big 3nsSu go SuNo Pres here
nF
The (3 or more) big people (or other higher animates) are coming here.
Similarly:

(53) (a) * ku - tiny - weti - ō  
3ns  nsCl  3ns  3+  3nsSu  see  3Ob  Fut 
human  F

They (3 or more) will see it.

(b) weti - ō  
3ns  3+  3nsSu  see  3Ob  Fut 
F

They (3 or more higher animates) will see it.

(c) ku - tiny - weti - ō  
3ns  nsCl  3ns  3+  3nsSu  see  3Ob  Fut 
human  F

The (3 or more) {women} will see it.

Gender is also marked in non-singular human NPs by the prefixes /ma/ "male" and /ō~muku/ "female". /ma/ and /muku/ can largely replace /tiny/ marking, being able to prefix to all NP constituents except the preposed generic, and deriving human nouns in the same way as /wati/ and /ngungku/ (as in (37) and (39)). Since /tiny/ prefixing is only ever found on one constituent at a time, /ma/ and /ō~muku/ also act as concord prefixes, appearing on all constituents to the right of a /tiny/ marked element. /ma/ and /muku/ are not inflected for number or person.

(54) (a)  
{ku-tiny- ma- pintipinti- ō}  
nsCl  old man  nsCl  good  nsCl  deaf 
ma  male  male 

The good, deaf old men.

(b)  
{ku-tiny- muku- kunikuni- ō}  (muku-)galpu (muku-)kan 
nsCl  old woman  nsCl  many  nsCl  this 
female  female  female 

These many old women.

(c)  
{ku-tiny- kapil- ō}  
nsCl  big  nsCl  that 
ma  male 

Those big males.
Note that in (53(c) and (d) /ma/ and /Ø-muku/, applying to the deictic, provide the gender specificity which permits /tiny/ prefixing on the adjective.

It must be noted also that the zero variant of the female prefix is only available where gender marking is obligatory, i.e. where the corresponding male NP would take /ma/. For example, with a pronoun not prefixed with /tiny/ the absence of a prefix on a modifier is not interpreted as marking female gender. With the /tiny/ prefix, however, gender specification is required, and a non-prefixed modifier is interpreted as indicating female gender:

(55) (a) weti - Ø ngalpu pi - ti - ngki - wa
     3ns 3+ many 3nsSu see 3Ob Fut
     F

Many (higher animates) will see it.

(b) ku - tiny - weti - Ø Ø - ngalpu pi - ti - ngki - wa
     3ns nsCl 3ns 3+ nsCl many 3nsSu see 3Ob Fut
     human female F

Many females will see it.

(c) ku - tiny - weti - Ø ma - ngalpu pi - ti - ngki - wa
     3ns nsCl 3ns 3+ nsCl many 3nsSu see 3Ob Fut
     human male F

Many males will see it.

The equational and foregrounding functions of the singular human prefixes are split between the /tiny/ and /ma/~muku/ non-singular prefixes. /tiny/ acts as an equational:

(56) (a) kumpu - tiny - marapat - Ø
     1Inc nsCl moustache 3+
     human

We (inc., 3 or more) are (male) adolescents.

(b) kini - tiny - kunikuni - pini
     2ns nsCl old woman 2
     human

You (2) are old women.

/ma/ and /muku/ prefixed elements, however, do not function on their own as clauses.
The male adolescents.
*They are male adolescents.

The old women.
*They are old women.

/tiny/ prefixed NPs do not take case inflections and normally appear, as do first and second person /wati/ and /ngungku/ prefixed NPs, adjoined to a main clause, their roles being explicitly coded where necessary on pronominal copies, as for the singulars in (43) above. /ma/ and /muku/ prefixed NPs, on the other hand, are fully inflected for case roles; /ma/ and /muku/ appear to have the same function of foregrounding information as the singular prefixes, and the discussion on this point above applies equally to them.

3.2.2. Lower Animates and Non Flesh Food

The generics for these two classes are /awu/ "meat, flesh food" and /miyi/ "non-flesh food". The corresponding class prefixes are /a-/ and /mi-/, which appear to be contractions of the generics.

A large set of nouns (several hundred have been recorded so far) obligatorily take the /a-/ prefix or a preceding /awu/. This set consists of edible body part names and the names of virtually all animals, insects, fish and birds which inhabit the Daly River region. The generic itself is preposed when the creature or body part is being specifically pointed out as a source of meat; the prefix optionally, but normally co-occurs with the generic.

(58) (a) awu a - mati ngi - 0 - 0 - wuki - ya
meat Cl barramundi lsSu PreVb 3Ob eat Past
1A nF
I ate the barramundi.

(b) kumpu - n - 0 - a awu a - purang - wa
1IncSu go 2 Past meat Cl wallaby PURP
nF 1A

We (inc., 2) went for wallaby (to get some to eat).

Elsewhere only the prefix appears:
(59) (a) ngi - tin - ø - a a - wurrumpun
lsSu see 3Ob Past Cl crocodile
nF 1A

I saw a crocodile.

(b) yikin a - muwa teyen - tyan
ls Cl bone old now
1A

My bones are old now (i.e. the bones in my body).

In attaching to body part names the /a/- prefix does appear to have the same semantic domain as /awu/ and only occurs with the names of parts which are normally cooked and eaten. The prefix appears with such a part name even though the part referred to may be of a creature which is itself not normally eaten, e.g. humans, donkeys, bush rats.

(60) Body Parts

<table>
<thead>
<tr>
<th>/a/- Class</th>
<th>Not /a/- Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>a-muwa bone</td>
<td>piyi head</td>
</tr>
<tr>
<td>a-purrilli liver</td>
<td>nguri penis</td>
</tr>
<tr>
<td>a-wurang leg</td>
<td>perri foot</td>
</tr>
</tbody>
</table>

The "meat" meaning, though, is not strictly maintained in the attachment of /a/- to the names of animals, birds etc. The nouns, for example, for creatures such as lice, mosquitoes, worms and scorpions all take the prefix, although such creatures are never eaten, at least by humans. The general rule is that /a/- occurs with the names of any lower animate, i.e. any entity which is not in the category of higher animate. Thus humans, dingoes and other dogs, spirits (human or otherwise) and important mythological creatures are not marked as members of the /a/- class. Additionally the names of recently introduced animals such as the horse and the buffalo do not take a class marker; the generic /awu/ is placed before these nouns if "horse meat", "buffalo meat" etc. is to be specifically referred to. And with onomatopoeic names, such as those for "green frog" and "crow" below, the /a/- prefix does not appear.

(61) Animates

<table>
<thead>
<tr>
<th>/a/- Class</th>
<th>Not /a/- Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>a-purang grey wallaby</td>
<td>watyan-tangki dingo</td>
</tr>
<tr>
<td>a-mati barramundi</td>
<td>nantu horse</td>
</tr>
<tr>
<td>a-pultyarrk black eaglehawk</td>
<td>papalu buffalo</td>
</tr>
<tr>
<td>a-mampi louse</td>
<td>watkuwatku green frog</td>
</tr>
<tr>
<td>a-ngayti scorpion</td>
<td>wakwak crow</td>
</tr>
<tr>
<td>a-winngal mosquito</td>
<td></td>
</tr>
</tbody>
</table>
/a-/ also prefixes to all nouns denoting types of eggs:

(62) a-muwarri ... eggs (generic), goose eggs
    a-murrimirri ... nits

/a-/ prefixing is not productive, and there are only a few cases in which there is a difference in meaning between a stem with and without the prefix:

(63) muning ... feather    a-muning ... bird (generic)
    mungarr ... toenail, fingernail  a-mungarr ... shellfish
    manyirr ... sand, sugar    a-manyirr ... brown "sugar" ant
    muwarri ... testicle (as sex)
    organ
    awu muwarri ... testicle (as meat)  a-muwarri ... egg (generic)

/mi-/ prefixing is relatively straightforward. Almost two hundred stems have been recorded which are obligatorily prefixed with /mi-/ or preceded by /miyi/. These stems denote the edible produce or parts of trees and plants, or the trees and plants themselves. Trees and plants which do not have edible produce or parts are not in this class. Thus this is broadly the category of non flesh food, but excluding sugar bag (honey) and sugar bag components, honey-like introduced substances (such as golden syrup), and milk and (introduced) dairy products. (The classification of honey is discussed in the next section.)

(64) Non Flesh Food

<table>
<thead>
<tr>
<th>/mi-/ Class</th>
<th>Not /mi-/ Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>mi-mari ...</td>
<td>muty ... native tobacco</td>
</tr>
<tr>
<td>macazamia palm</td>
<td></td>
</tr>
<tr>
<td>macazamia nuts</td>
<td></td>
</tr>
<tr>
<td>mi-san ...</td>
<td>mawuny ... ironwood</td>
</tr>
<tr>
<td>scrub pandanus</td>
<td></td>
</tr>
<tr>
<td>mi-kari ...</td>
<td>tyamarra ... sugar bag</td>
</tr>
<tr>
<td>lily root</td>
<td></td>
</tr>
<tr>
<td>mi-lityin ...</td>
<td>yangi ... breast, breast milk, cow's milk</td>
</tr>
<tr>
<td>gooseberry bush</td>
<td></td>
</tr>
<tr>
<td>gooseberry fruit</td>
<td></td>
</tr>
</tbody>
</table>

As with /awu/ the generic is used to mark the entity as a food source; again the prefix is optional following the generic, but normally appears.

(65) (a) miyi  mi - mari  ngi - Ø - Ø - wuki - ya
    nFl  Cl  macazamia 1sSu  PreVb  3Ob  eat  Past  nF
    I ate the macazamia nuts (soaked and ground).

(b) mi - mari  kil - li - ngki - kit - a  marrka - wa
    Cl  macazamia 1ExcSu  PreVb  3Ob  cut  Past  flower  PURP  nF
    We (exc., 3 or more) cut down the macazamia palm to get the flowers from it.

/mi-/ prefixing is not productive; I have no examples in which the
removal of the prefix alters the meaning of the stem (cf. (63) above).

All NP constituents to the right of a prefixed noun in the lower animate or non flesh food category obligatorily copy the class prefix:

(66) (a) a - kuwan a - malika a - nimpini
   Cl  snake Cl  long Cl  3
   1A   1A  1A

Three long snakes.

(b) mi - kunkuri mi - yikin
   Cl  long yam Cl  Is=my
   nF1   nF1

My long yams.

(c) awu purang yikin
    meat wallaby ls=my

My wallaby meat.

(d) miyi katti yuwa
    nF1 good that

That good bush tucker.

Like the human class markers these prefixes derive nouns from other NP constituents:

(67) (a) kini - mun - ø - it - nginal - a  a - yikin
    2sSu  paint 3ob pick Is  Past Cl  Is=my
    nF    up

Did you (sg.) pick up my meat for me ?

(b) kini - tin - ø - a  a - kapil a - yuwa
    2sSu  see 3ob Past Cl  big Cl  that
    nF   1A

Did you (sg.) see that big animal ?

(c) yikin tuwarr mi - katti - nganan
    Is  full Cl  good SCE (of food) nF1

I'm full, from good tucker.

NPs marked for membership of these two classes are not limited in their syntactic behaviour; they can be fully inflected and can occupy any role in the clause.

3.2.3. Trees and Things

The generic for the third non human class is /thawurr/ "tree, wood" and the corresponding prefix is /tha(rr)-/. The generic itself
appears before the names of trees and bushes not in the /mi-/ class. But it does not appear before the names of tree or bush parts.

(68) thawurr mawuny ... ironwood (tree or wood)
    thawurr tan ... coolibah tree, wood of coolibah tree
*thawurr mulingi ... leaf

Informants differ in their treatment of the /tha(rr)-/ prefix in this context. Older speakers at Knuckey's Lagoon apply the prefix to the specific noun and to other NP constituents, in the same way as /a-/ and /mi-/. e.g.:

(69) (thawurr) tha(rr)-mawuny tha(rr)-kapil
    tree,wood Cl ironwood Cl big
    Tr Tr

The big ironwood tree.

Other informants, however, do not use the prefix at all here, structuring NPs such as (69) with a repeated generic. (This mechanism is used for the stick and weapon classes - see 3.2.4.):

(70) thawurr mawuny thawurr kapil
    tree,wood ironwood tree,wood big

In the speech of all informants both generic and prefix do apply to sugar bag, sugar bag components, honey like or sweet substances (golden syrup, sweet tea etc.), tobacco and tobacco bushes.

(71) tha(rr) - tyamarra ... sugar bag
    tha(rr) - muwarri ... white egg-like substance in sugar bag
    tha(rr) - wuti ... sweet tea
    water
    tha(rr) - muty ... native tobacco (bush or dried leaf)
    tha(rr) - wiyan ... introduced tobacco
    shit

/thawurr/ and /tha(rr)-/ behave syntactically like the class markers discussed in 3.2.2.; the prefix is obligatorily copied when it appears, and nouns are derived by them from other NP constituents:

(72) (a) kini - tin - ø - a  tha(rr) - kapil  tha(rr) - yuwa
    2sSu see 30b Past Cl big Cl that
    nF Tr Tr

    Did you (sg.) see that big tree ? (Older speakers only.)

(b) yikin tinykirrk  tha(rr) - winytyani - nganan
    ls sick Cl no good SCE
    Tr

    I'm sick, from that bad tobacco/honey.
/thawurr/ and /tha(rr)-/ are also used to mark inanimate things in general:

(73) (a) ampi thawurr kan
NEG tree, wood here
=thing

Nothing here.

(b) tha(rr) - mpa tha(rr) - yuwa
Cl IN TERR Cl that
Tr what kind Tr of

What kind of thing is that?

The generic and the prefix apply freely with this meaning to adjectives, quantifiers and deictics to derive nouns:

(74) tha(rr) - katti good
... good thing (=true)
good tobacco, honey
good wood, tree (older speakers only)

thawurr malika long
... long thing
tall tree, long piece of wood

thawurr nginytyi one
... one thing
one tree, piece of wood

thawurr tha(rr) - kan... this thing, tobacco, honey
this this tree, wood (older speakers only)

3.2.4. Clubs and Sticks

Two further noun classes show a similar behaviour to those described in 3.2.2. and 3.2.3., although there is no contraction from the generic nouns to form distinct prefixes. The generics are /yeri/ "club, waddy" (which also means "child") and /yeli/ "digging stick." /yeri/ obligatorily precedes the names of hand held weapons such as boomerangs, clubs, nulla-nullas. Note, however, that spears and woomeras are not members of this class. One informant accounted for the homophony of the generic with the word for "child" by claiming that all /yeri/ marked weapons were meant to be made by a man for his own use, and that they should be as dear and personal and as much a product of him as his children. This account remains to be verified by further anthropological investigation, but it does explain why spears, which are made communally and en masse, and which, unlike the /yeri/ weapons, are freely traded, are not /yeri/ marked.

/yeli/ obligatorily precedes the nouns for digging sticks, yamsticks, crowbars etc. The /yeri/ and /yeli/ classes have only about 20 members each:
(75) /yeri/ Class
yeri kunytyunguny ... boomerang
yeri makulpi ... nulla-nulla
yeri mityampa ... heavy ended fighting stick

/yeli/ Class
yeli patpat ... digging stick
yeli kupa ... crowbar

In the place of class prefixing the generics are optionally repeated to the left of other NP constituents:

(76) (a) kini - tin - Ø - a yeri kunytyunguny (yeri) yikin
    2sSu see 30b Past Cl boomerang Cl ls=my
    nF Wp Wp

    Have you (sg.) seen my boomerang ?

(b) apan ka - pul - Ø yeli patpat (yeli) malika (yeli) yikin
    where 3sSu lie Pres Cl digging Cl long Cl ls=my
    nF Ds stick Ds Ds

    Where is (lies) my digging stick ?
Chapter 4 : FREE FORM PRONOUNS

4.1. Paradigm

Marrithiyel has both free and bound pronouns. Bound pronouns are discussed in Ch. 5, Verbal Morphology. The free forms are given in the table below, arranged according to the conventional singular-dual-plural categories. This categorisation is discussed and reanalysed in 4.5.

<table>
<thead>
<tr>
<th>(1)</th>
<th>SINGULAR</th>
<th>DUAL</th>
<th>TRIAL</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st:</td>
<td>yikin</td>
<td>ngangki-∅</td>
<td>ngangki-nim(pini)</td>
<td>ngangki-nim</td>
</tr>
<tr>
<td>Excl:</td>
<td>ngangki-nim</td>
<td>kati-pini</td>
<td>kati-(nimpini)</td>
<td>kati-∅</td>
</tr>
<tr>
<td>2nd:</td>
<td>nany</td>
<td>nati-pini</td>
<td>nati-(nimpini)</td>
<td>nati-∅</td>
</tr>
<tr>
<td>3rd, Fem:</td>
<td>ngiya</td>
<td>weti-pini</td>
<td>weti-(nimpini)</td>
<td>weti-∅</td>
</tr>
<tr>
<td>Masc:</td>
<td>nang</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Free form pronouns normally refer only to higher animate entities. The category of higher animates consists primarily of humans, but also includes animates (e.g. dingoes) of mythological importance. Similarly, the verbal affix /ti/, no doubt identical to the /ti/ in the non singular non first-inclusive stems in the table above, is restricted to coding only higher animate (non singular non first-inclusive) direct objects. (See 5.1.3.1. for fuller discussion of this category.) It is only in their possessive and reflexive functions that the free pronouns can denote non higher-animates (see 4.3. and 4.4.).

There are further relationships, involving partial identities of form, between the free pronouns and the pronominal verbal affixes. These relationships can be seen by examining the paradigms of 5.2. and 5.3., and while they can be expected to provide evidence for a study of the development of the Marrithiyel verb system they offer no important insights for this synchronic analysis.

The singular stems take no distinct number inflection but instead have a unique shape for person-number and, in the case of third person, gender. It is perhaps possible to suggest that /na-/ be analysed as the second person stem with /-ny/ and /-ti/ as the singular and non-singular number affixes respectively. However, since /-ny/ appears nowhere else as a singular marker (in fact, we shall see in Chapter 5 that the only /-ny/ number marker has a non-singular function) this is an unproductive and asystematic analysis.

Four non-singular stems can be distinguished:

(2) ngangki ... First Inclusive
    kati ... First Exclusive
    nati ... Second
    weti ... Third
The non-singular stems are suffixed for dual, trial and plural number. As is obvious from (1), the first inclusive stem behaves somewhat differently in this respect. First inclusive takes a zero affix to mark the dual. The other non-singular stems are obligatorily suffixed with */-pini/* in the dual. With free pronouns in certain semantic roles (see 5.4.) there is verbal number agreement and */-pini/* is copied as a suffix to the (complex) verb stem. For systematic reasons that will become obvious as we proceed we can postulate the */-pini/* first inclusive affix as also copied in this position. Agreement with free subject pronouns is shown below:

(3) ngangki - ø kumpu - ny - ø - kurr - ø - a
1Inc Dual 1IncSu PreVb 30b hit, Dual Past
nF kill (Inc)

We (inc., 2) hit it. (i.e. you and I did it)

(b) kati - pini kirri - nyi - ngki - kurr - pini - ya
1Exc Dual 1ExcSu PreVb 30b hit, Dual Past
nF kill

We (exc., 2) hit it. (i.e. we two, not you, did it)

To encode non-dual, that is, to mark number as greater than or equal to 3, the first inclusive stem is obligatorily suffixed with */nim/*.

The other non-singular stems take a zero suffix in the non dual. Again, there is verbal copying under certain conditions (see 5.4.).

(4) (a) ngangki - nim kumpu - ny - ø - kurr - nim - a
1Inc 3+ 1IncSu PreVb 30b hit, 3+ Past
nF kill (Inc)

We (inc., 3 or more) hit it.

(b) kati - ø kirri - nyi - ngki - kurr - ø - a
1Exc 3+ 1ExcSu PreVb 30b hit, 3+ Past
nF kill

We (exc., 3 or more) hit it.

The trial suffix */nimpini/*, which is also the free standing numeral "three", attaches to all the non-singular stems. Unlike the other non zero pronominal number suffixes */nimpini/* is optional, and is employed only when style, clarity of discourse etc., require the overt marking of the trial. This suffix can also be copied in the verb:

(5) (a) ngangki - nimpini kumpu - ny - ø - kurr - nimpini - ya
1Inc 3 1IncSu PreVb 30b hit, 3 Past
nF kill

We (inc., 3) hit it.
since in practice the non dual non singular number suffixes (i.e. /nim/ for first inclusive and Ø for other persons) are used freely when three entities are being referred to, the /pini/ for first inclusive, and the /nimpini/ for other persons, are marked by parentheses as optional in the trial column in (1) above.

In summary, then, the non singular number suffixes are:

<table>
<thead>
<tr>
<th></th>
<th>First Inc.</th>
<th>Other Non-Singular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual</td>
<td>Ø</td>
<td>-pini</td>
</tr>
<tr>
<td>Trial</td>
<td>-nim(pini)</td>
<td>-(nimpini)</td>
</tr>
<tr>
<td>Non Dual</td>
<td>-nim</td>
<td>Ø</td>
</tr>
</tbody>
</table>

The possible breakdown of the trial suffix into /nim/ and /pini/, and the synchronic analysis of these morphemes, raises some intriguing questions, which are taken up in 4.5.

4.2. Usage

Free form pronouns behave syntactically like nouns. Apart from the /kin/ ergative they take no case inflections in major syntactic roles; as explained for nouns in 3.1. role identification is achieved by word ordering (S-0-IO) and the bound pronouns on the verb:

(7) (a) weti - Ø yuwa ku - nyi - iti - kurr - Ø - a weti - Ø kan 3ns 3+ that 3nsSu PreVb 3nsOb hit, 3+ Past 3ns 3+ this nF kill

That lot (of higher animates) hit this lot (of higher animates).

(b) weti - Ø kan ku - nyi - ngki - kurr - Ø - a weti - Ø yuwa 3ns 3+ this 3nsSu PreVb 3nsOb hit, 3+ Past 3ns 3+ that nF kill

This lot (of higher animates) hit that lot (of higher animates).

(8) (a) yikin ngi - ny - iny - tyip - Ø - a 1s 1sSu PreVb 2sOb spear s Past nF

I speared you (sg).

(b) nany ngi - ny - iny - tyip - Ø - a 2s 1sSu PreVb 2sOb spear s Past nF

I speared you (sg).

As exemplified by (8(a)) and (b), Marrithiyel speakers prefer to include
in a clause with pronominal participants in major roles at least one free form pronoun, even when roles are unambiguously coded by the verbal prefixes. It is not currently clear whether any semantic difference is associated with the choice of a free pronoun in one role over that in another, as in (8(a)) and (b).

As with nouns, /kin/ is suffixed to transitive subjects when the role or identity of the subject is to be emphasised, or when normal word order is disrupted and the subject appears after the object or post-verbally:

(9) (a) (nany) ngi - ny - iny - tyip - Ø - a yikin - kin
    2s 1sSu PreVb 2sOb spear s Past 1s ERG nF

    I speared you (sg).

(b) wuy yikin - kin nany ngi - ny - iny - tyip - Ø - a
    no 1s ERG 2s 1sSu PreVb 2sOb spear s Past nF

    No, I speared you (sg).

Again as with nouns, free pronouns functioning as indirect objects are unmarked:

(10) yikin nga - Ø - mpi - pup - Ø - wa tyanti nany
    1s 1sSu PreVb 2sIO give s Fut spear 2s

    I will give you (sg.) the spears.

Similarly, free pronouns functioning as subjects of intransitives or as subjects of non-verbal equationals take no case inflection:

(11) (a) nati - pini ki - ni - ny - pini - Ø yuwa
    2ns Dual 1ExcSu go SuNo Dual Pres there nF

    Are you (2) going there?

(b) nany kapil
    2s big

    You (sg) are big.

Free pronouns in other roles take the nominal case inflections as described in 3.1. above. (12) illustrates pronouns with locative and purposive suffixes:

(12) (a) a - kuwan kanta witip ka - pul - impi - Ø - Ø nany - nanga
    Cl snake there close 3sSu lie 2s s Pres 2s LOC-ALL nF L-A

    There's a snake just next to you (sg).
4.3. Reflexive Pronouns

Free reflexive pronouns are formed by the prefixing of /muri/ "hand" to the free forms:

(13) (a) yikin ngi - rr - ingin - pit - Ø - a muri - yikin
    ls lsSu PreVb lsRef1 wash s Past hand ls
    nF Reflexive

I washed myself.

(b) kati - pini kirri - nyi - ikiny - kurr - pini - ya
    lExc Dual lExcSu PreVb lExc hit, Dual Past
    nF Refl kill

muri - kati - pini
hand lExc Dual
Reflexive

We (exc., 2) hit ourselves.

Free reflexive pronouns, as shown in (13(b)), are fully suffixed for number. They are not obligatory, and do not require the co-occurrence of the corresponding non-reflexive free subject pronoun.

Since bound reflexive pronouns are not always distinct from bound object forms the free reflexive does function to distinguish participant roles. e.g.:

(14) (a) ku - mun - ngi - Ø - ya
    3sSu paint lsOb s Past
    nF 3sFem
    Refl

\{ He/she painted me. (unmarked reading) \\
\{ She painted herself. (in context) \\

(b) ku - mun - ngi - Ø - ya muri - ngiya
    3sSu paint 3sFem s Past hand 3sFem
    nF Refl Reflexive

She painted herself.

Because the first singular object bound pronoun has the same form as the third singular feminine reflexive bound pronoun the verbs in (14(a)) and (b) are identical. Without the /muri/ prefixed pronoun of (14(b)) the unmarked interpretation of the verb is as a non reflexive transitive, as glossed in (14(a)). (Note that an alternative method of disambiguation is to add to (14(a)) a non reflexive free pronoun, i.e. /yikin/,
Distinguishing object person.)

Free reflexive pronouns can be used whenever a reflexive verb can be constructed. Some constraints on the use of reflexive are discussed in 5.1.3.2. We simply note here that the use of /muri/ "hand" as the free reflexive prefix does not involve the restriction of the reflexive pronoun to actions performed by hand, and it is freely employed with verbs such as "see", "kick" etc.

(15) ngi - tin - ngin - ø - a muri - yikin
     lsSu see 1sRefl s Past hand 1s
     nF Reflexive

I saw myself.

Both free and bound third unit reflexive pronouns always take either a masculine or feminine form; the third unit free reflexive, for example, is either /muri-nang/ "himself" or /muri-ngiya/ "herself". Now reflexives can be constructed with non higher-animates as subjects; these entities are not specified for gender by other processes in the language such as noun classification or gender marked free pronouns acting anaphorically. In such cases the masculine is the unmarked choice for the reflexive pronoun, and the use of the feminine involves a specific statement of the sex of the entity referred to. e.g.:

(16) (a) a - muning ki - tin - ni - ø - ya muri - nang wuti - nanga
     Cl bird, 3sSu see 3sMasc s Past hand 3sMasc water LOC-ALL
     nF Reflexive

The bird saw itself in the water.

(b) a - muning ki - tin - ngi - ø - ya muri - ngiya wuti - nanga
     Cl bird, 3sSu see 3sFem s Past hand 3sFem water LOC-ALL
     feather nF Reflexive

The (female) bird saw herself in the water.

4.4. Possession

4.4.1. Pronominal Possession

Marrithiyel is somewhat unusual among the languages of Australia in having no morphological coding of possession for pronouns. Pronominal possession is expressed by juxtaposition of the free form (number suffixed) pronoun and the noun denoting the possessed entity. With possession of body parts the free pronoun precedes the body part name. The pronoun may be omitted where the possessor is obvious from context or unambiguously cross-referenced by bound pronouns in the verb.
(17) (a) (yikin) a - muwa  
ls Cl bone  
sPres
(a) (yikin) a - muwa  
ls Cl bone  
sPres

My bones are aching. (Impersonal Construction - see 5.1.3.3.)

(b) nany perri wulkisim ka - ni - ngu - perri - Ø - Ø  
2s foot blood 3sSu go exude foot s Pres

Your (sg) foot is bleeding.

With pronominal possession of other entities the free pronoun follows the noun denoting the possessed object:

(18) (a) nitin nati - pini - nanga ku - ni - ny - wurr - Ø - a  
country 2ns Dual LOC-ALL 3nsSu go SuNo die 3+ Past

They (3 or more) died in your country.

(b) titha nany ꞣ ngi - tin - Ø - Ø - a  
father 2s 1sSu see 3Ob s Past

I saw your (sg) father.

The pronoun functioning as a possessive in the position shown in (18) behaves syntactically like an adjective, e.g. for the purpose of taking class marking prefixes in agreement with the head noun, as in (19(a)). Note that, like other adjectives, possessives are, in the absence of class marking, unable to function as NPs in their own right (see 3.2.). Thus the second clause in (19(b)) is ungrammatical if /wiyan/, the head of the object NP, is omitted. /wiyan/ is obligatory even though its deletion would lead to no ambiguity; the free pronoun which would remain after deletion of the head noun could not be interpreted as object, since the verb is clearly marked as taking a third person object:

(19) (a) a - kuwan a - nany ngi - 1 - Ø - tut - Ø - a  
Cl snake Cl 2s 1sSu PreVb 3Ob find s Past

I found your (sg) snake.

(b) tyatya - kini - rri - Ø - Ø - Ø wiyan yikin /  
like, 2sSu PreVb 3Ob s Pres shit, 1s  
want nF  
tobacco

Do you like my tobacco? / I like yours.

(sg)
With possession by a third person, of course, the deletion attempted in (19(b)) could result in ambiguity. The obligatory appearance of the head noun therefore maintains the distinction between (20(a)) and (20(b)) below. This would seem at best to be a minor motivation for this constraint on possessive NP structure, since the possessive function of a lone free pronoun could well be clear from context.

(20) (a) tyatya - ngi - rri - ø - ø - ø *(thawurr) nang
like, 1sSu PreVb 30b s Pres tree,wood 3sMasc
want nF =thing

I like his (thing).

(b) tyatya - ngi - rri - ø - ø - ø nang
like, 1sSu PreVb 30b s Pres 3sMasc
want nF

I like him.
*I like his.

Marrithiyel thus has no mechanism for encoding general possession corresponding to the English "mine", "yours" etc. The most general level of possession involves the preposing of a generic, as in (20(a)), or the prefixing of a corresponding class marker, as in (21), to a free pronoun. As explained in 3.2., class prefixed adjectives can function as NPs:

(21) \{tha(rr)-\}yikin
a
ngi - rr - ø - tim - ø - a
Cl
3s
1sSu PreVb 30b bury s Past
\{Tr\}
\{1A\}

I buried his \{thing
\{meat, animal\}\}.

Body part and other pronominal possession are clearly distinct. In body part possession the free pronoun functions as a generic, coding the whole, of which the following noun denotes a specific part. This whole-part structuring is also found with nominal possession (discussed in the next section) and with class marked NPs (as in 3.2.). With other possession the free pronoun acts as an adjectival modifier, denoting an attribute of the head noun, and cannot function as a possessive without an overt indication of at least the class to which the head noun belongs. The relative ordering of the free pronoun and the noun (with the consequent differences in class prefixing) marks a critical distinction:

(22) (a) yikin a - muwa
1s Cl bone 1A

My bones (= the ones in my body)

(b) a - muwa a - yikin
Cl bone Cl 1s
1A 1A

My bones (= the ones in my possession)
4.4.2. Nominal Possession

As with pronominals, nominal part-whole and other possessive relationships are structured differently. Part-whole relationships do not involve the use of free form pronouns, and are simply coded by juxtaposition, the noun denoting the whole preceding the noun denoting the part, as in pronominal body part possession.

(23) (a) ngi - ny - Ø - kit - Ø - a - purang wurang

1sSu PreVb 3Ob cut s Past Cl wallaby leg

I cut off the wallaby's leg.

(b) tyanti thami meltem

spear point sharp

The point of the spear is sharp.

With other nominal possessives the structure of (23) is modified. The noun denoting the possessor still precedes the noun denoting the possessed object, but this sequence is now followed by a free form pronoun encoding person, number and, in the singular third person, gender of the possessor.

(24) (a) kini - tin - Ø - Ø - a meri tyalwu nang

2sSu see 3Ob s Past man canoe 3sMasc nF

Did you (sg) see the man's canoe.

(b) ma - yuwa muku weti - pini ku - ni - ny - Ø - a

nsCl that woman 3ns Dual 3nsSu go SuNo 3+ Past male

The (3 or more) wives of those two men have gone.

As discussed for reflexives, the gender specificity of the third singular free pronoun requires a choice to be made as to the gender of singular possessors not marked as masculine or feminine by other processes in the language. Here, as with reflexives, masculine is the unmarked choice, and the use of the feminine constitutes a specific gender statement. e.g.:

(25) (a) a - muning wuti nang ... The bird's water

Cl bird, water 3sMasc

1A feather

(b) a - muling wuti ngiya ... The (female) bird's water

Cl bird, water 3sFem

1A feather

This possessive structure is expandable, with larger NPs denoting possessor and possessed, as in (26(a)), and a series of possessors, as
(26) (a) kaka yikin watyan nimpini nang
    uncle is dog three 3sMasc

    My uncle's three dogs.

(b) meri kaka nang watyan nang awu nang
    man uncle 3sMasc dog 3sMasc meat 3sMasc

    The man's uncle's dog's meat.

Note that in (26(a)) each possessed entity, i.e. each non initial NP must be followed by a free pronoun. It should be added that while (26(b)) is an acceptable construction possessive NPs of such length are rarely heard in normal speech; possessives are normally confined to the two NP construction illustrated in (26(a)).

The free pronoun which codes possession by a pronominal can be distinguished from that which codes person-number-(gender) of an antecedent nominal possessor by the failure of the latter to take class marking prefixes. Thus we have:

(27) (a) a - wurrumpun a - muwa ... the crocodile's bones
    Cl crocodile Cl bone (i.e. the ones in his body)
    1A 1A

(b) a - wurrumpun a - muwa a - nang ... his crocodile bones
    Cl crocodile Cl bone Cl 3sMasc (i.e. the ones belonging
    1A 1A 1A to someone)

(c) a - wurrumpun a - muwa nang ... the crocodile's bones
    Cl crocodile Cl bone 3sMasc (i.e. the ones in the croc-
    1A 1A odile's possession)

4.5. Number System

The first inclusive fits awkwardly into the pronominal person-number matrix presented in 4.1. above. It takes different dual, trial and plural suffixes from the other non singular stems; it is the only non singular stem for which a zero suffix marks restricted number (i.e. 2) rather than unbounded number (i.e. 3 or more). Elsewhere in northern Australia, where broadly similar difficulties with the first inclusive have been encountered, reorganisation of number concepts has produced more systematic analyses, McKay (1975), for example, writing on Rembarrnga (Central Arnhem Land), presents the following conventionally organised paradigm for the free form dative pronouns:
McKay's reanalysis, which is recapitulated and placed within a comparative Australian framework by Dixon (1980, Ch 11), consists of demonstrating the appropriateness of treating the first person inclusive dual as a singular-like form. (This move follows Conklin (1962)). The paradigm is re-arranged as below:

(29) Rembarrnga Dative Pronouns (Dixon, 1980, p352)

McKay's reanalysis shows that the categorisation of the first inclusive dual as a "singular" type of stem now reveals as systematic:

(a) variation in stem form from first inclusive dual to trial/plural, a variation which for other persons occurs between singular and non singular;

(b) the apparent anomaly in first inclusive of a non singular stem with a specific rather than unbounded numerical denotation;

(c) the suffixing of /-pparra/ and the numerical reference of the plural.

"Singular", "dual" and "plural" are now inappropriate descriptive terms. cf. Dixon (1980, p352):

...We replace singular, dual, trial and plural by "minimal", "augmented" and "unit augmented". "Minimal"indicates reference to just "I", "you and I", "you" or "he/she". If one other is added to any of these groups a "unit augmented" form is employed, and if more than one other person is involved then a form from the "augmented" column will be appropriate.

We should therefore examine whether the type of reclassification shown in McKay's study proves fruitful for Marrithiyel. (30) below shows the data re-organized. The "minimal" first inclusive stem is now /ngangki-/ and the "augmented" or non minimal first inclusive stem is now /ngangki-nim/. /-pini/ now attaches to all augmented stems to mark number as one greater than minimal i.e. the trial in the case of first inclusive, and the dual for the others. And the anomaly of the restricted number reference of /ngangki-/ is now
overcome. However, all in all, the reorganisation of the Marrithiyel data does not provide for a more systematic analysis of the pronominal number system. The trial, for example, must still be included as a separate category; the /nimpini/ suffix is strictly three-fold in denotation - it cannot be analysed as coding one greater than unit augmented since it cannot attach to /ngangki-nim/ to mark four referents:

(31) (a) *ngangki-nim-nimpini kumpu - tin - 0 - nim - (nimpini) - ya
     1Inc A TRIAL 1IncSu see 30b A TRIAL Past nF
     We (inc.) four saw it.

     (b) ngangki-nim-0 tyityukini tyityukini kumpu-tin - 0 - nim - a
         1Inc A nU two two 1IncSu see 30b A Past nF
         We (inc.) 4 saw it.

Further, since (as discussed in 4.1. above) /ngangki-nim-0/ is used when three or more are referred to (i.e. in the terms of the system given in (30), the /pini/ suffix is optional for first inclusive but obligatory elsewhere), the analysis of the 0 affix in the augmented column necessarily involves the trial; that is, this affix must be glossed as marking "three or more" and cannot be explicated as "greater than unit augmented" (which would entail four or more referents for /ngangki-nim-0/).

Two of the advantages gained in reorganizing the Rembarrnga data, those cited in (a) and (c) above, are therefore not paralleled in the Marrithiyel material. The first inclusive is still anomalous in having an invariant stem for all numbers. And the attempt to describe number categories as derived by systematic incrementation of "minimal" persons is confounded by the necessary reference to the trial.

There is, however, evidence of a minimal/non minimal basis to the differential use of pronouns. Consider, for example, the possessives in (32) below. The use of the non singular pronoun in (32(b)) does not, unless specified by context, imply that all parties included in
its reference are in joint possession of the object; it entails no more than that one of the set of people referred to by the pronoun is the possessor. This implication holds whether the non-singular stem is suffixed for dual or greater number:

(32) (a) watyan yuwa watyan nany dog that dog 2s
    That's your (sg) dog.

(b) watyan yuwa watyan nati-(pini) dog that dog 2ns Dual
    That's your dog. (= dog belonging to one or more of you (two))
    (= (in context) dog belonging to both/all of you.)

(33) shows that the different implications as to the extent of possession illustrated in (32) are projected along a minimal/non minimal axis:

(33) (a) watyan yuwa watyan ngangki - Ø dog that dog 1Inc M
    That dog is ours (inc., 2). (= belongs to you (sg) and me.)
    (≠ belongs to one of us.)

(b) watyan yuwa watyan ngangki-nim-(pini) dog that dog 1Inc A U
    That dog is ours (inc.). (= belongs to me and one or more of you (two))
    (= (in context) belongs to all of us)

In addition minimal pronouns in possessive function have been recorded where numerically the non minimal is required, but where all the people referred to by the pronoun are assumed to be in joint possession. Thus the (superficially at least) strongly Catholicized Marrithiyel people talk about /titha ngangki-Ø/, "father"-1st Inc. Minimal = "our father", meaning "the father belonging to all of us." The more traditional cultural heritage is treated with minimal possessives similarly, e.g.:

(34) kan nitin yuwakimiya Marrithiyel weti - Ø nitin nang this country from the Marrithiyel 3A nU country 3M Masc beginning
    This is traditional Marrithiyel country.

In the same fashion the use of non minimal pronouns in key syntactic roles does not appear to imply participation in the action by all people to which the pronoun refers. (35) illustrates this with subject pronouns:

(35) (a) weti - Ø kan pil - li - ningki - kurr - Ø - wa 3A nU this 3A Su PreVb 1IncOb hit, nU Su Put F kill MI Ob
    These people are going to hit you (sg) and me.
    (= One or more of these people . . . .)
    (= (in context) All these people . . .)
These people went over there.

(= Some (probably most) of these people ...)

(= (in context) All these people ...)

Similarly with objects:

(36) a - kuwan  
Cl snake  
ki  -  l  -  iti  -  titip  -  ø  -  a  
3M Su PreVb 3A Ob bite M Su Past woman

The snake bit one or more of the women.

This phenomenon clearly requires further investigation. Note in particular the differing numerical implications involved in the use of pronouns as transitive and intransitive subjects in (35(a)) and (b). At the moment there is at least a prima facie case that minimal pronouns entail unitary participation of their referents whereas non minimals do not involve such a unitary concept. This usage of pronouns would appear to be part and parcel of specific cultural notions of collective action, responsibility, culpability etc. and may turn out to be of some relevance in the study of the fate of the Marrithiyel people following contact with European culture, with its drastically different concepts of corporate behaviour. As far as I am aware, this non European use of non minimal pronouns has not been recorded elsewhere in Australis.

Within the non-minimal pronouns the first inclusive is still distinguished by its being derived from the minimal form. In fact evidence from the verbal coding of first inclusive requires that inclusive non-minimal be set up as a separate number category. First inclusive, for example, is the only person for which there is never any variation in form (on a minimal/augmented basis) in bound subject pronouns. Augmented number for first inclusive is marked on the verb exclusively by the suffixing of /nim/. Compare (37(a)) and (b):

(37) (a) ngangki - ø  
kumpu - tin - ø - ø - a
1Inc M 1IncSu see 30b M Su Past

We (inc., 2) saw it.

(b) ngangki - nim  
kumpu - tin - ø - nim - a
1Inc A 1IncSu see 30b A Su Past

We (inc., 3 or more) saw it.

Other persons, however, regularly (though not always) select distinct minimal and augmented bound subject pronouns. No overt post-verbal number suffix appears to mark this distinction. Contrast (38) with (37):
Similarly, with non-subject bound pronouns non minimal for first inclusive is marked by the /nim/ verbal suffix, and there is no variation in form in the bound pronoun itself, e.g.:

(39) (a) ngangki - Ø  
1Inc  M  3M Su see 1IncOb M Su Past  
M  Ob

He saw us (inc., 2).

(b) ngangki - nim  
1Inc  A  3M Su see 1IncOb AI Ob Past  
M  Su

He saw us (inc., 3 or more).

However, the non-subject bound pronouns of the other persons take distinctive forms in the minimal and augmented; again, as with the subject pronouns, no overt post-verbal number suffix additionally codes this basic distinction, e.g.:

(40) (a) ngi - tin - nyi - Ø - ya  
1ExcM Su see 2M Ob M Su Past  
F  Ob

I saw you (sg).

(b) ngi - tin - ti - Ø - ya  
1ExcM Su see 2A Ob M Su Past  
Y  Ob

I saw you (3 or more).

Thus the appearance of /nim/ post-verbally marks first inclusive non minimal, and, since its appearance there with non-unit first inclusive core participants (see 5.4.) is obligatory, its absence is also significant, and encodes core participants as minimal or non first-inclusive. Further, since /pini/ obligatorily appears in the post-verbal number slot for non-inclusive non-minimal dual function, and optionally appears following /nim/ for trial function (i.e. /pini/ verbal suffixing, as explained in 5.4., follows the same principles as /pini/ pronominal suffixing, as discussed in 4.1.), the absence of /pini/ post-verbally
marks augmented non inclusive core participants as non unit. Thus a
post-verbal zero number affix marks core participants as either minimal
or augmented non-inclusive non-unit.

The pronoun paradigm can thus be divided as in (31); note that the
trial, as discussed above, is necessarily included, and that specifica-
tion for singularity is required by the human class prefixes (see 3.2.).

(31) Pronominal Number Divisions

<table>
<thead>
<tr>
<th>MINIMAL</th>
<th>AUGMENTED</th>
<th>Number Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Singular</td>
<td>Unit</td>
<td>Trial</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>ngangki-Ø</td>
<td>ngangki-nim-</td>
</tr>
<tr>
<td>Singular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Exc.</td>
<td>yikin</td>
<td>kati-</td>
</tr>
<tr>
<td>2nd.</td>
<td>nany</td>
<td>nati-</td>
</tr>
<tr>
<td>3rd Fem</td>
<td>ngiya</td>
<td></td>
</tr>
<tr>
<td>3rd Masc</td>
<td>nang</td>
<td>weti-</td>
</tr>
</tbody>
</table>

The four main oppositions, Minimal/Augmented, Singular/non Singular,
Inclusive/non Inclusive and Unit/non Unit, in combination can now ac-
count for all variation according to number so far discussed. The /nim/
pronominal and verbal suffix, for example, marks "augmented inclusive."
And the post-verbal zero number affix can be specified as marking simp-
lly "non augmented-inclusive non unit," abbreviating slightly the dis-
junctive explication given above.

There is one further major process in the verbal morphology which
motivates the classification of the augmented inclusive as distinct
from the other augmented pronouns. Augmented non inclusive subjects
are cross-referenced, under conditions discussed in Ch. 5, by specific
number morphemes in the non subject position in the verb (i.e. non ini-
tially). /ny/ is this number morpheme in (42) below; it marks only
intransitive subjects.

(42) (a) ka - ni - Ø - wurr - Ø - a
3M Su go Su No die nAI Past
nF nU

He died.

(b) ku - ni - ny - wurr - Ø - a
3A Su go AnI Su die nAI Past
nF (intrans) nU

They (3 or more) died.

Augmented Inclusive subjects, however, are not so cross-referenced. Com-
pare (43(a)) and (b):
The \( \emptyset \) affix preceding the verb stem /wurr/ "die" in (42(a)) and (43) thus marks subject as minimal or augmented inclusive, in opposition to the /ny/ augmented non inclusive subject marker. Further examples of this number division are discussed in Chapter 5.
Chapter 5: VERBAL MORPHOLOGY

5.1. Auxiliary Structure and Function

The basic structure of Marrithiyel verbs is described by the following broad formula:

(1) VERB = + AUXILIARY± COMPLEX VERB STEM + NUMBER + TENSE/MOOD

There are 15 distinct auxiliary paradigms, outlined in detail in 5.2. below. A Marrithiyel verb typically consists of one of these auxiliaries prefixed to a verb stem to which markers of participant number and tense/mood are obligatorily suffixed, e.g.:

(2) (a) nati - pini na - ni - ny - tyaktyak - pini - wa tyantyi
2A U 2A Su go AnI Su light a U Fut fire
F (Intrans) fire
AUXILIARY CVS

Are you two going to light the fire?

(b) ngu - ti - ny - mel - Ø - wa
1ExcM Su see 2M Ob watch nAI Fut nU
F AUXILIARY CVS

I will watch you (sg).

(c) a - rri - iti - tim - Ø - wa ma - yuwa
2M Su PreVb 2/3A Ob bury nAI Fut nsCl that nU male
F AUXILIARY CVS

Are you (sg) going to bury those (3 or more) men?

The auxiliary has four broad functions, which are discussed below.

5.1.1. Subject Person-Number

All subjects are obligatorily coded by a bound pronoun form auxiliary initial. This bound pronoun form normally precedes the auxiliary verb stem (see 5.1.4. below); on occasions, however, most commonly with the minimal imperative/second person future form, no subject pronoun can be analysed out as distinct from the auxiliary verb stem and we instead have a single morpheme encoding both subject information and the verbal semantics of the auxiliary. Compare (3(a)) and (b):

(3) (a) nu - mu - ngki - it - punti - Ø - Ø
2A Su paint 3ob pick up hand nAI Imp nU
F AUXILIARY CVS

(You (3 or more)) pick it up (in your hands).
(b) ma - ø - it - punti - ø - ø
2M Su 30b pick up hand nAI Imp
F nU
paint
AUXILIARY
CVS

(You (sg)) pick it up (in your hands).

The subject pronoun or the subject/verb morpheme normally has a unique form for person within each auxiliary verb paradigm. In fact there is only one instance in the language, in the "go" auxiliary verb, of the subject-auxiliary verb stem sequence being ambiguous as to person, e.g.:

(4) ki - ni - ny - tyat - ø - a
\[\begin{align*}
2A Su & \quad \text{go} \quad \text{AnI Su} \quad \text{sit down} \quad nAI \quad \text{Past} \\
1ExCA & \quad \text{Su} \quad \text{(Intrans)} \quad nU
\end{align*}\]

nF
AUXILIARY
CVS

We (exc.)/You (3 or more) sat down.

Subject number, as mentioned in the analysis of the pronominal number system in Ch. 4, is marked on a minimal/augmented inclusive vs. augmented non inclusive axis. The auxiliary itself does not contain number morphemes marking augmented inclusive or unit subject; this job is carried out by the obligatory post-auxiliary post-complex verb stem number marker (see 5.4.). To maintain the remaining number distinctions the auxiliary has three procedures. Firstly, and most commonly, the subject pronoun or subject-auxiliary verb stem morpheme varies for number, thus acquiring a form unique for person and number. This is illustrated in (3) above and (5) below:

(5) (a) ka - rri - ø - purrity - ø - ø tyanti
3M Su PreVb 30b make nAI Pres spear nU
AUXILIARY CVS

He's making a spear.

(b) ku - rri - ngki - purrity - ø - ø tyanti
3A Su PreVb 30b make nAI Pres spear nU
AUXILIARY CVS

They (3 or more) are making spears.

Secondly, the intransitive auxiliaries include a specific morpheme /ny/ to mark augmented non inclusive subject. This morpheme occurs before the auxiliary verb stem in two intransitive auxiliaries, and after the auxiliary verb stem in the remaining three intransitive auxiliaries. (This morpheme is deleted when it precedes a non subject
auxiliary affix - this is illustrated in (11) below and discussed in 5.1.3.2.)

(6) (a) kini - Ø - pal - pipi - Ø - ya
  2 Su M/AI Su lie smoke nAI Past
  nF down nU
  AUXILIARY CVS

You (sg) were lying down smoking.

(b) kini - ny - pal - pipi - Ø - ya
  2 Su AnI Su lie smoke nAI Past
  nF nU
  AUXILIARY CVS

You (3 or more) were lying down smoking.

(7) (a) kan - ngi - Ø - kušek - Ø - a
  2 Su sit M/AI Su drink nAI Past
  nF nU
  AUXILIARY CVS

You (sg) were sitting drinking.

(b) kan - ngi - ny - kušek - Ø - a
  2 Su sit AnI Su drink nAI Past
  nF nU
  AUXILIARY CVS

You (3 or more) were sitting drinking.

Thirdly, as presented in the analysis in 5.2.5. and 5.2.6., certain non subject bound pronouns included in the auxiliary vary for subject number and thus distinguish otherwise ambiguous forms. In (8) below this variation involves the opposition of a zero and non zero affix. In (9) it involves the prefixing of a specific morpheme /n/ to mark augmented non inclusive subject.

(8) (a) kini - Ø - Ø - wuki - Ø - ya
  2 Su PreVb 30b eat nAI Past
  nF M/AI Su nU
  AUXILIARY CVS

You (sg) ate it.

(b) kini - Ø - ngki - wuki - Ø - ya
  2 Su PreVb 30b eat nAI Past
  nF AnI Su nU
  AUXILIARY CVS

You (3 or more) ate it.

(9) (a) kini - Ø - Ø - ingin - pup - Ø - a
  2 Su PreVb M/AI lExCM give nAI Past
  nF Su IO nU
  AUXILIARY CVS

You (sg) gave it to me.
You (3 or more) gave it to me.

All three procedures can co-occur:

(10) (a) kun - Ø - a - Ø - ingin - pirr - Ø - a  
2M Su M/AI Su stand M/AI Su lExcM throw nAI Past 
AUXILIARY CVS 

You (sg) threw it at me.

(b) kini - ny - a - n - ingin - pirr - Ø - a  
2A Su AnI Su stand AnI Su lExcM throw nAI Past 
AUXILIARY CVS 

You (3 or more) threw it at me.

Note that the affixing of augmented non inclusive non subject bound forms can reverse these procedures, leaving subject number unmarked in the auxiliary. (11(a)) and (b), for example, following the deletion of the /ny/ subject number morpheme in (11(b)), can only be disambiguated by free form pronouns.

(11) (a) nany kan - ngi - Ø - iwiny - mutying - Ø - Ø  
2M 2 Su sit M/AI Su 3A IO listen nAI Pres 
AUXILIARY CVS 

Are you (sg) listening to them (3 or more) ?

(b) nati - Ø kan - ngi - ny - iwiny - mutying - Ø - Ø  
2A nU 2 Su sit AnI Su 3A IO listen nAI Pres 
AUXILIARY Ø CVS 

Are you (3 or more) listening to them (3 or more) ?

And in (12(a)) and (b), in which the subject-auxiliary verb stem sequences vary in form by virtue of the absence of the final nasal from the augmented auxiliary verb stem of (12(b)), ambiguity is derived by suffixation of the nasal initial object form to the augmented auxiliary. Again, free form pronouns are required for disambiguation.

(12) (a) nang ku - mun - Ø - iti - tyak - Ø - a mtti  
3M Masc 3M Su paint M/AI 2/3A paint nAI Past dotted 
AUXILIARY CVS 

He painted you/them (3 or more) all over (dotted style).
(b) weti - Ø  ku - mu - n - ti - tyak - Ø - a
3A  nU  3 Su  paint  AnI  Su  2/3A  paint  nAI  Past
nF  Ob  all over  nU
AUXILIARY  CVS

They (3 or more) painted you/them (3 or more).

Note additionally that in certain cases where the auxiliary fails to specify subject number the tense/mood suffix on the verb provides disambiguation. For example, the third augmented non future bound subject pronoun for the auxiliary verb "sit" is identical with the third minimal future form. The suffixing of an indirect object form to the auxiliary involves the elision of the /ny/ mor­ pheme which otherwise distinguishes the augmented (non inclusive) form. The auxiliary is thus no longer distinct for tense or subject number. It is only the verb final tense suffix which determines whether the auxiliary is in future or non future form, and therefore whether the subject is minimal or augmented:

(13) (a) ka - wu - Ø - iwiny - mutying - Ø - wa
3M  Su  sit  M/AI  3A  IO  listen  nAI  Fut
F  Su  nU
AUXILIARY  CVS

→ ka - wu - winy - mutying - Ø - wa  (Rl)
He will listen to them (3 or more).

(b) ka - wu - ny - iwiny - mutying - Ø - a
3A  Su  sit  AnI  3A  IO  listen  nAI  Past
nF  Su  nU
AUXILIARY  CVS

→ ka - wu - winy - mutying - Ø - a  (Rl)
They (3 or more) listened to them (3 or more).

And in (14(a)) and (b) the affixing of an object form unmarked for subject number, together with the application of phonological rules R1 and R2 (see 2.4.), which eliminate the underlying difference in form in the auxiliary verb stem, again derives an auxiliary whose tense and therefore subject number reference is deduced from the verb final tense suffix:

(14) (a) ngi - rr - iti - tim - Ø - a
lExcM  PreVb  2/3A  Ob  bury  nAI  Past
Su  nU
AUXILIARY  CVS

→ ngi - rr - ti - tim - Ø - a  (R2)
I buried them (3 or more).
5.1.2. Tense

The second major item of information coded by the auxiliary, as indicated by the above discussion, is tense. Tense marking within the auxiliary is achieved by a variation in form of each subject-auxiliary verb stem sequence on a future/non-future axis, e.g.:

(15) (a) ngi - 1 - Ø ........


(b) ngupu - 1 - Ø ........

1st Exc. Minimal Subject - 3rd Object future /li/ auxiliary.

(16) (a) ki - mi - Ø ........

3rd Minimal Subject - 3rd Object non future /mi/ "say,do" auxiliary

(b) ki - pi - Ø ........

3rd Minimal Subject - 3rd Object future /mi/ "say,do" auxiliary

This variation of form within the auxiliary now collaborates with the verb final tense/mood suffixes to fully specify tense/mood as past, present, future or imperative-hortative. These suffixes are discussed more fully in 5.5. The forms are: /-(y)a/ past, /Ø/ present, /wa/ future and /Ø/ imperative-hortative. The past and present suffixes co-occur with non future auxiliaries. Since all auxiliaries which are eligible for the imperative-hortative mood (i.e. first inclusive and second person auxiliaries) have a subject-auxiliary verb stem sequence unique for subject person, subject number and (future)
tense and do not lose this uniqueness with the affixing of any non
subject bound pronouns, there is no ambiguity in having a zero aff­
ix for both imperative and present, e.g.:

(17) (a) wa - rri - Ø - iwiny - man - Ø - Ø
      2M Su go M/AI Su 3A IO crawl nAI Imp
      F nU
      AUXILIARY CVS

      (You (sg)) creep up to them (3 or more) on hands and knees.

(b) kini - \{ni - ny\} - iwiny - man - Ø - Ø
      2 Su \{go AnI Su\} 3A L-A crawl nAI nU
      nF go M/AI Su
      (Intrans) CVS

      You (sg./3 or more) are creeping up to them (3 or more).

In the analysis in the paradigms set out in 5.2, each minimal/augment­
ed inclusive and augmented non inclusive subject-auxiliary verb stem
sequence has a distinct form for future and non future tense. With
the affixing of certain non subject bound pronouns ambiguating sub­
ject number, as illustrated in (13) and (14) above, tense reference
within the auxiliary can also become ambiguous. However, since the
zero imperative affix makes no contribution to this ambiguity, and
since tense is otherwise unequivocally marked by an obligatory verbal
suffix, the tense of the verb itself, and by implication that of the
auxiliary is always clear.

5.1.3. Auxiliary Non-Subject Person-Number

The third broad function of the auxiliary is to code person-
number of certain non-subject participants. Non-subject bound pro-
nouns occur auxiliary finally, following the auxiliary verb stem.
There are two basic sets of these non-subject bound forms, set out
in detail in 5.2.5. and 5.2.6. The first set with which we are con-
cerned marks non-reflexive direct objects, and the second reflexives,
indirect objects and certain other goal and locative participants.

5.1.3.1. Object Person-Number

Non-reflexive direct objects are divided into two categories:
higher animate and other. In everyday discourse the category of high­
er animates consists of humans, spirits and dingoes (the mythological
progenitors of the Marrithiyel people). In some contexts higher anim­
ate status is accorded to other animates e.g. to possums, eaglehawks,
snakes and some other totemic animals in traditional narratives, where
they frequently take on human characteristics, and in discussions of
law, where they can assume sacred significance. Some speakers extend high animate status to all dogs rather than restricting it to dingoes. Naturally, any entity which is addressed as second person or included in the reference of first person is treated as a higher animate.

Non-reflexive direct object bound pronouns generally vary for person. There is in fact only one failure in this respect in the object forms, where augmented second and third higher animate fall together and are both marked by /-(i)ti/, e.g.:

(18) ngi - tin - ti - yilyil - ø - a
    lExcM see 2/3A recognise nAI Past
    Su hA Ob nU
    nF AUXILIARY CVS

I saw you/them (3 or more higher animates).

Higher animate objects, however, are distinguished from other objects by varying for number, having distinct forms for minimal/augmented inclusive and augmented non inclusive. The minimal/augmented inclusive object markers also cross-reference subject number, either by an inflectional form, as in (19(a)), or by the affixing of a distinct number morpheme /n/, as in (20(a)); this phenomenon has been discussed in 5.1.1.  

((19) (a) nang kini - nyi - ngki - tyip - ø - a
3M Masc 2 Su PreVb 3M hA Ob spear nAI Past
    nF AnI Su nU
    AUXILIARY CVS

You (3 or more) speared him.

(b) weti - ø kini - nyi - iti - tyip - ø - a
3A nU 2 Su PreVb 2/3A hA Ob spear nAI Past
    nF nU
    AUXILIARY CVS

You (sg./3 or more) speared them (3 or more).

(20) (a) nany ku - nyi - n - impi - tyip - ø - a
2M 3A Su PreVb AnI Su 2M Ob spear nAI Past
    nF nU
    AUXILIARY CVS

They (3 or more) speared you (sg.).

(b) nati - ø ku - nyi - iti - tyip - ø - a
2A nU 3A Su PreVb 2/3A hA Ob spear nAI Past
    nF nU
    AUXILIARY CVS

They (3 or more) speared you (3 or more).

(Note that the analysis in 5.2.5. also presents some augmented high-
er animate object forms, namely those attaching to auxiliaries I have labelled "simple (transitive) verbs", as taking an /n/ morpheme marking subject number. See 5.2.2. for discussion of this.)

Non higher-animate objects are not marked for number within the auxiliary. They instead are marked by morphemes which vary only according to subject number. Both minimal and augmented non high-animate objects are marked by $\emptyset$ for minimal/augmented inclusive subjects, and /-ngki/ for augmented non inclusive subjects. The objects of (21(a)-(d), for example, are not in the category of higher animates; their bound copies within the auxiliary vary in form for subject number only, and the clauses are therefore ambiguous as to object number:

(21) (a) a - wakirr ngi - tin - $\emptyset$ - $\emptyset$ - $\emptyset$ - a
Cl fish lExcM see 3Ob nAI Past
1A Su M/AI Su nU
nF
AUXILIARY
CVS

I saw (a) fish.

(b) a - wakirr ki - ti - ngki - $\emptyset$ - $\emptyset$ - a
Cl fish lExcA see 3Ob nAI Past
1A Su AnI Su nU
nF
AUXILIARY
CVS

We (exc., 3 or more) saw (a) fish.

(c) a - muwa a - wurrumpun ngi - $rr$ - $\emptyset$ - tim - $\emptyset$ - a
Cl bone Cl crocodile lExcM PreVb 3Ob bury nAI Past
1A 1A Su M/AI Su nU
nF
AUXILIARY
CVS

I buried the crocodile bone(s).

(d) a - muwa a - wurrumpun· ki - rri - ngki - tim - $\emptyset$ - a
Cl bone Cl crocodile lExcA PreVb 3Ob bury nAI Past
1A 1A Su AnI Su nU
nF
AUXILIARY
CVS

We (exc., 3 or more) buried the crocodile bone(s).

Note that 3rd minimal higher animate objects are coded in the auxiliary with bound pronouns identical to those for non high-animates. The substitution of 3rd minimal higher animate NPs in (21(a)-(d)) therefore involves no change in the verbal morphology. But the clauses are now restricted in interpretation to minimal objects only; the higher animate NP itself is not marked for number, but of course would require the distinct augmented bound object forms in the auxiliary if it were itself non-singular:
I saw the dingo/*dingoes.

We (exc., 3 or more) buried the man/*men.

Given the identity of these minimal object forms, therefore, one needs to know, in order to interpret the Ø and /ngki/ object affixes fully, whether the object has higher animate status. If so, Ø marks minimal object-minimal/augmented inclusive subject, and /ngki/ marks minimal object-augmented non inclusive subject. If the object is not higher animate only subject number is coded and there is no specification as to object number. In the absence of an overt or contextually specified object, and where both higher animate and other objects are freely allowed by the semantics of a verb, speakers prefer to interpret Ø and /ngki/ as encoding minimal higher animates, e.g.:

(23) kil - li - ngki - tut - Ø - a
   lExcA PreVb 3Ob find nAI Past
   Su AnI Su nU
   AUXILIARY CVS

\{ We (exc., 3 or more) found him/her. (Unmarked Interpretation) \}
\{ We (exc., 3 or more) found it/Them. (Non high-animates) \}

No preference of interpretation between minimal and augmented for non high-animate bound object forms has been observed.

There is one further possible ambiguity in marking person for non-reflexive direct objects. This arises from identities in certain subject forms together with the near identity of the first inclusive object form (for minimal/augmented inclusive subject) /ingki/ and the third object form /ngki/. The verb /kininyingkikurra/, for example, is interpretable as both (24(a)) and (b).

(24) (a) kini - ny - ingki - kurr - Ø - a
   2 Su PreVb lInc Ob hit,kill nAI Past
   nF M/AI Su nU
   AUXILIARY CVS

   You (sg) hit both of us (inc.).
While (24(a)) is conceded to be a possible interpretation by Marrithiyel speakers it is regarded as being somewhat odd, and in practice is rarely, if ever, used. Indeed, a first inclusive subject or object, or for that matter any first inclusive which is coded by a bound form in the auxiliary, does not normally co-occur with a first or second person participant which is also coded in the auxiliary (except, of course, for the reflexive first inclusive). Notions like (24(a)) are instead expressed using two verbs:

(25) kini - ny - ing - kurr - ø - a / kini - ny - impi - kurr - ø - a
    2 Su PreVb 1ExcM hit, nAI Past 2 Su PreVb 2M hit, nAI Past
    nF Ob kill nU nF Refl kill nU

You (sg.) hit me / You (sg.) hit yourself.

There is no claim here that this co-occurrence constraint is a process specifically motivated by a desire to disambiguate the object forms, nor even that the constraint is specific to Marrithiyel, since it is perhaps the case that it derives from more universal semantic factors and that most languages would prefer a structure like (25) to the participant combinations of (24(a)). Its presence in Marrithiyel, though, does mean that object person, apart from the identity of second and third augmented higher animate, is unequivocally marked in the auxiliary.

5.1.3.2. Other Non-Subject Person Number

The second set of auxiliary non-subject bound pronouns codes person and number of participants with a variety of distinct roles within the clause. As with the minimal non-third person object forms, these other non-subject minimal forms also cross-reference subject number by the affixation of the /n/ morpheme for augmented non inclusive subject. Further, minimal third person varies for gender, and is always marked as either masculine or feminine. In this section we survey the roles filled by participants marked with these non-subject forms, and investigate ambiguities in the system; in the following section, 5.1.3.3., we discuss some of the implications of this data.

Firstly, this set of affixes marks reflexive:
The identity of the third minimal feminine reflexive and first minimal object forms can lead to ambiguity, e.g.:

(27) ka - rri - ing - tu - wurang - φ - a
    3M Su PreVb 1ExcM Ob touch leg nAI Past
    nF
    AUXILIARY CVS

\{ He/she/it touched my leg. \\
\{ She touched herself on the leg. \\

As explained in Ch. 4, the reflexive meaning of verbs such as (27) can be specified by using a free form reflexive pronoun, e.g.:

(28) ka - rri - ing - tu - wurang - φ - a
    3M Su PreVb 3M Fem touch leg nAI Past hand 3M Fem
    nF Refl.
    AUXILIARY CVS

She touched herself on the leg.

The other identities in form between the object and this set of non-subject bound pronouns lead to no ambiguities in coding person-number of reflexive, though without the co-occurrence of the free reflexive pronoun, the bound reflexive forms may be ambiguous with the other functions of the non subject non object pronouns.

These non subject pronouns mark only what we can classify broadly as volitional reflexive acts. (29(a)), for example, with the reflexive pronoun in the auxiliary, can only denote a deliberate action. With the non volitional action of (29(b)), however, the undergoer is marked with a direct object bound pronoun and the source of the action (marked with the instrumental suffix in (29(a)) but not there cross-referenced with an auxiliary subject pronoun) now appears as subject:
I pierced myself with a spear (deliberately).

I pierced myself on a spear (accidentally).
A spear pierced me (accidentally).
I was speared (agent unknown, unseen).

The precise dimensions of the interpretation of volitionality in Marri-thiyel are matters of some complexity, having to do with the semantic characterisation of auxiliary and complex verb stems, constraints on their co-occurrence, and consequent eligibility of NPs for subjecthood, and it is not investigated in any detail in this study. It is relevant here, though, to note that (visual) perceptual verbs are generally treated as volitional. Thus (30) takes the reflexive bound pronoun; the act of perception appears to be treated as deliberate, even though quite accidental circumstances caused the subject to see himself:

I fell out of the canoe and saw myself in the water.

(For a discussion of the /nginanga/ verbal affix in (30) see 5.3. Note also that the first verb in (30) has a dummy subject and takes a third minimal bound subject morpheme.)

This second set of non-subject bound pronouns is normally restricted to coding only higher animates, However, the reflexive function is extended to all animates, i.e., to all potentially volitional subjects, e.g.:
(31) (a) a-kuwan ki-1 ini titip -ø-a
Cl snake 3M Su PreVb 3M Masc bite nAI Past
1A nF Refl. nU
AUXILIARY CVS

The snake bit itself (deliberately).

(b) a-muning ki-tin ni -ø - ø - ya muri - nang
Cl bird, 3M Su see 3M Masc nAI Past hand 3M Masc
1A feather nF Refl. nU Reflexive
AUXILIARY CVS

The bird saw itself.

As discussed in 4.3., construction of reflexive with these subjects, involving the use of the gender specific bound pronouns, requires a choice to be made as to gender; unmarked choice for the reflexive pronoun is masculine, and the use of the feminine involves a specific statement of the sex of the entity referred to.

Another function of the non subject non object bound pronouns is to encode what is conventionally classified as the indirect object, e.g. the recipient of "give", the entity to which a "say, tell" or "show" action is directed etc. With these ditransitives the higher animate indirect object is obligatorily coded in the auxiliary and replaces the direct object; bound direct and indirect object pronouns never co-occur:

(32) (a) tyanti ku - ø - ngki - pup - ø - a
spear 3A Su PreVb 30b put down, nAI Past
nF AnI Su give nU
AUXILIARY CVS

They (3 or more) put down the spears.

(b) tyanti ku - ø - n - ingin - pup - ø - a
spear 3A Su PreVb AnI Su 1ExcM put down, nAI Past
nF IO give nU
AUXILIARY CVS

They (3 or more) gave me the spears.

(33) (a) marri kini - mi - ngki - ø - ø - ya
words 2 Su say,do 30b nAI Past
nF AnI Su nU
AUXILIARY CVS

You (3 or more) said it.

(b) marri kini - mi - n - in - ø - ø - a
words 2SSu say,do AnI Su 3M Masc nAI Past
nF IO nU
AUXILIARY CVS

You (3 or more) told him.
(a) a - rri - ø - mipiri - ø - ø yeri tyapaty
2M Su PreVb 30b show nAI Imp child small
F  M/AI nU Su
AUXILIARY CVS

(You (sg.)) show (off) the baby.

(b) a - rri - ing - mipiri - ø - ø muku yikin
2M Su PreVb 3M Fem show nAI Imp woman lExcM
F  IO nU =my
AUXILIARY CVS

(You (sg.)) show it to my wife.

Note that with verbs like /mipiri/ "show" in (34) above, which are capable of taking both higher animate object and higher animate indirect object, the indirect object is still marked in the auxiliary rather than the direct object:

(35) a - rri - ing - mipiri - ø - ø meri muku
2M Su PreVb 3M Fem show nAI Imp man woman
F  IO nU
AUXILIARY CVS

(You (sg.)) show the man to the woman.

As mentioned in 3.1., the ordering of the object NP before the indirect object NP disambiguates clauses of similar structure to (35) in which the gender, person or number marking of the indirect bound form fails to distinguish the NP it cross-references, e.g.:

(36) a - rri - iwiny - mipiri - ø - ø meri muku
2M Su PreVb 3A IO show nAI Imp man woman
F  nU
AUXILIARY CVS

(You (sg.)) show the men to the women.
*(You (sg.)) show the women to the men.

The preference for marking of indirect objects extends to reflexive ditransitives:

(37) (a) a - rri - ingin - mipiri - ø - ø muri - nany
2M Su PreVb lExcM show nAI Imp hand 2M
F  IO nU Reflexive
AUXILIARY CVS

Show yourself to me.

(b) kati - pini kirri - ø - iwiny - pup - pini - a
1ExcA U lExcA PreVb 3A IO put down, U Past
Su  give
nF
AUXILIARY CVS

muri - kati - pini weti - ø yuwa
hand 1ExcA U 3A nU that

We (exc., 2) gave ourselves to those (3 or more) people.
 (=surrendered)
Given that we have already seen a concern for animacy evidenced in the direct object bound pronouns, the preference for marking indirect objects over direct objects is not surprising. Indirect objects thus marked are obligatorily higher animate. The direct objects of these ditransitive verbs are more likely to be inanimate, though of course with certain verbs higher animates are allowed. The preferential marking of indirect objects therefore is at least partly a preference for marking higher animates involved in the action of the verb over object participants likely to be non high-animate. Marrithiyel verbs subcategorize strictly for higher animate indirect objects; as a result, for example, one cannot "give" to a non high-animate in the way one can "give" to high animates. (38(b)) is unacceptable, and a structure more like (38(a)) is required:

(38) (a) ki - ∅ - ∅ - pup - ∅ - a - a - muwa a - muning - wa
3M Su PreVb 3Ob put down, nAI Past C1 bone C1 bird, PURP
nF M/Al Su give nU 1A 1A feather
AUXILIARY CVS

He put down the bones for the bird.

(b) *ki - ∅ - iwiny - pup - ∅ - a - a - muwa a - muning
3M Su PreVb 3A IO put down, nAI Past C1 bone C1 bird,
 nF give nU 1A 1A feather
AUXILIARY CVS

He gave the bones to the bird.

Preferential coding of indirect objects is not unique to Marrithiyel. According to Dixon (1979, p95):

...Alan Rumsey has pointed out a universal tendency: those NPs which are likely to be highest on the "human/animate/inanimate" hierarchy will be cross-referenced in the verb. Many languages have just two NPs cross-referenced: one is the NP in S or A [i.e. intransitive or transitive subject function], while the other is the indirect object (if there is one) or direct object (in the absence of an indirect object).

Indirect object bound forms also appear in two participant constructions, where they mark the higher animate goals of certain experiential (cognitive, perceptual, emotional) verbs, e.g.:

(39) (a) nany - wa ka - ngi - impi - mutying - ∅ - a
2M PURP 1ExcM sit 2M listen nAI Past
Su M/Al Su nU
nF AUXILIARY CVS

I was (sitting) listening to you (sg.).
(b) ku - wa - ikiny - wil - miri - Ø - ya  
3M Su stand 1ExcA hot eye nAI Past  
nF nU  
AUXILIARY CVS  

He was wild at us (exc., 3 or more).

(c) nang yuwa tyangi - weti ka - ni - ingin - Ø - Ø - Ø  
3M Masc that ear INST 3M Su go 1ExcM nAI Pres  
nF M/AI Su nU  
AUXILIARY CVS  

That fellow knows me.

As with the indirect objects in (38) above, this suffixing of non-object forms to the auxiliary is restricted to and obligatory with higher animates. Without higher animate objects the auxiliaries of (39) take no non-subject bound forms:

(40) (a) ka - ngi - Ø - mutying - Ø - a wangka  
1ExcM sit M/AI listen nAI Past (male) dance  
Su Su nF  
AUXILIARY CVS  

I was (sitting) listening to the corroboree.

(b) kati - pini tyangi - weti ki - ni - ny - Ø - pini - Ø  
1ExcA U ear INST 1ExcA go AnI U Pres  
Su Su nF  
AUXILIARY CVS  

nitin yuwa  
country that  

We (exc., 2) know that country.

As discussed in the following section, the auxiliaries of (39), being unable to take direct object bound pronouns, are classified as formally intransitive. The NPs cross-referenced in intransitive auxiliaries as goals take the /wa/ purposive suffix, as in (39(a)). While the semantic factors determining formal transitivity or intransitivity remain to be thoroughly investigated we can observe here that there is a set of verbs which are formally transitive, which belong to the same broad semantic domain as the verbs in (39) and which also encode their higher animate objects obligatorily with the reflexive/indirect object forms. The NPs cross-referenced by transitive auxiliaries as this type of non-direct-object take no case inflection, just like indirect objects and free reflexive pronouns.

(41) (a) nati - Ø ampi - ya kini - Ø - n - ingin - tyang - Ø - a  
2A nU NEG Past 2A Su PreVb AnI 1ExcM hear nAI Past  
nF Su nU  
AUXILIARY CVS  

You (3 or more) didn't hear me.
I forgot (about) you (sg.).

(The prefixing of the verb stem to the auxiliary in (41(b)) is discussed in 5.6.)

In the absence of a higher animate object, in fact even when there is no overt object, the auxiliaries of the verbs in (41) are required to take the /ŋki/ object markers.

(42) (a) nati - ŋ - ampi - ya kini - ŋ - ngki - tyangi - ŋ - a
You (3 or more) didn't hear (it).

(b) tim - ki - mi - ngki - tyangi - ŋ - a
They forgot what I told them.

It is by no means unusual for languages to distinguish objects of experiential verbs from other objects. If one proposes that there is, in universal terms, a cline of transitivity rather than discrete transitive/intransitive categorisation (cf. Hopper and Thomson, 1980), and that maximal transitivity is manifested by a "hit,kill" type of verb, with a volitional agent, a highly affected patient, and a close spatio-temporal connection between agent and patient, then the non direct-object coding of experiential objects marks their reduced transitivity, i.e. reduction of agent control and patient affectivity and some distancing of agent and patient in space and/or time. In Marrithiyel visual-perceptual verbs are normally classified with the fully transitive verbs, and objects of perception are coded with direct object forms:

(43) yikin ki - tin - ngi - ŋ - ŋ - ya
He saw me.

Other experiential objects, however, are coded by indirect object forms;
this may be because of the looser spatio-temporal connection required
for "hearing" or "forgetting" someone than for "seeing" him. These
objects, as shown by the auxiliary bound forms which cross-reference
them, are classified with the higher animate indirect objects of di-
transitives. These experiential and indirect objects both are the
higher animate entities to which an action is directed, and which are
not sufficiently affected by the action or sufficiently connected
with the agent to be marked as patients. I shall refer to these en-
tities as higher animate goals.

Not all two participant verbs are restricted to taking exclusive-
ly higher animate goal or higher animate object forms. The perceptual
verbs, for example, can take either set of affixes, though with a cru-
cial difference in meaning; compare (44) below with (43)

(44) yikin ki - tin - ngin - ø - ø - a
 lExcM 3M Su see lExcM nAI Past
 nF hA G nU
 AUXILIARY CVS

He looked for me.

Further, the affixing of the higher animate goal forms is not restrict-
ed to verb stems conventionally regarded as in the category of exper-
entials. It at least extends to certain types of motion verbs. The
auxiliary verb in (45(a)), for example, is formally transitive; with
non high-animate and non-overt objects it takes the /ø~ngki/ direct
object affixes and means "arrive, reach". However, it cannot take
higher animate bound object forms; to express the reaching of a high-
er animate destination a different verb, as in (45(b)), is required.
But higher animate goal forms can be affixed to the auxiliary of
(45(a)), again modifying the meaning of the verb:

(45) (a) ku - muyi - ngki - ø - ø - ya (tyilak)
 3 Su reach 30b nAI Past tyilak
 nF AnI Su nU
 AUXILIARY CVS

They (3 or more) arrived (at Tyilak).

(b) ku - ni - ny - iwiny - ø - ø - ya ma - yuwa - nanga
 3A Su go AnI Su 3A nAI Past nsCl that LOC-ALL
 nF hA L-A nU male
 AUXILIARY CVS

They (3 or more) went to those (3 or more) men (and got there).
=They (3 or more) reached those (3 or more) men.

(c) weti - ø ku - muyi - ikiny - ø - ø - a kati - ø
 3A nU 3A Su reach lExcA nAI Past lExcA nU
 nF hA G nU
 AUXILIARY CVS

They (3 or more) came to see us (exc., 3 or more).
(The deletion of the /ny/ morpheme and the locative function of the higher animate goal forms, as in (45(b)), are discussed later in this section.)

And in (46) the higher animate goal form marks the undergoer of an essentially motional action:

(46) ku - ni - ny - ikiny - mingity - Ø - a
    3A Su go AnI Su lExcA abandon nAI Past
    nF Ø hA G (deviously) nU
    AUXILIARY CVS

They (3 or more) sneakily left us (exc., 3 or more) for dead.

Note that the failure to structure (46) with a transitive auxiliary and a direct object form is not accounted for by reduced patient affectivity. On the contrary, high affectivity is implied. Here it seems that the non transitive structure is required because this affectivity proceeds more from negative factors, i.e., an absence of spatio-temporal connection between agent and patient than from a direct transitive link between the participants.

Yet another function of these non-object bound pronouns is to mark higher animate locatives and allatives:

(47) (a) nityi ngu - n - ini - Ø - Ø - wa
    night lExcM go 3M Masc nAI Fut
    Su hA L-A nU
    F M/AI Su
    AUXILIARY CVS

I will go to him tonight.

(b) a - kuwan yuwa ka - pul - ini - Ø - Ø - Ø perri
    Cl snake there 3M Su lie 3M Masc nAI Pres foot
    1A nF hA L-A nU
    M/AI Su
    AUXILIARY CVS

A snake's there (lying) by his foot.

This function is only available to verbs which are specified as taking no higher animate goals and no direct object pronouns. Formally transitive verbs, as shown in (48(a)) and (b), always mark the direct object in the auxiliary in preference to an allative-locative participant. Similarly, formally intransitive verbs which take a higher animate goal cannot encode an allative-locative; compare (48(c)) and (d).

(48) (a) ku - nyi - ngki - kurri - Ø - ya nany - nanga
    3A Su PreVb 30b dig a nAI Past 2M LOC-ALL
    nF AnI Su hole nU
    AUXILIARY CVS

They (3 or more) dug a hole by you (sg.).
(b) *ku - nyi - n - impi - kurri - ø - ya nany - nanga
   3A Su PreVb AnI Su 2M    dig a nAI Past 2M LOC-ALL
   nF        hA L-A    hole nU
   AUXILIARY         M/AI Su CVS

   They (3 or more) dug a hole by you (sg.).

(c) nany - wa ka - ngi - mpi - mutying - ø - a nang - nanga
   2M    PURP lExcM sit 2M    listen nAI Past M LOC-AL
   nF Su   hA G   nU
   AUXILIARY         M/AI Su CVS

   I was sitting by him listening to you (sg).

(d) *nany - wa ka - ngi - ini - mutying - ø - a nang - nanga
   2M    PURP lExcM sit 3M Masc listen nAI Past 3M LOC-ALL
   Su             hA L-A   nU   Masc
   AUXILIARY         CVS

   I was sitting by him listening to you (sg.).

It may be objected that (45(c)), in which the formally transitive verb cross references what may appear to be essentially a locative-allative NP, constitutes a counter-example to the principle illustrated in (48). However, the final NP in (45(c)) cannot be analysed as a locative-allative; unlike the other locative-allative NPs cross-referenced in formally intransitive verbs, it is unable to take either of the locative-allative case inflections, /nanga/ or /than/:  

(49) * weti - ø    ku - muyi - ikiny - ø - ø - a kati - ø - {than}
   3A    nU    3A Su reach lExcA nAI Past lExcA nU {ALL
   nF     hA G   nU {LOC-ALL
   AUXILIARY         CVS

   They (3 or more) reached us (exc., 3 or more).

As mentioned in 5.1.1., a morpheme /ny/ marks augmented non inclusive subject in the intransitive auxiliaries; in three of these auxiliaries /ny/ appears after the auxiliary verb stem and therefore immediately before any higher animate goal/locative-allative bound forms that may be affixed. In fact the /ny/ which appears in this position does not co-occur with any non subject bound pronouns, and is deleted prior to them. With minimal and augmented inclusive non subject bound forms this is an economical move, eliminating /ny/ before the morpheme /n/, which itself has exactly the same function as /ny/.
By contrast, deletion of /ny/ before the augmented non inclusive bound pronouns, which are not themselves marked for subject number, leads to ambiguities as to subject within the auxiliary; this has been illustrated in (11) and (13) above. This deletion therefore appears to be somewhat unmotivated. (Note that no cluster constraints or morphophonemic processes, as discussed in Ch. 2, account for it.) One might perhaps observe that both indirect and certain direct augmented non inclusive object forms with transitive auxiliaries lack subject number marking, and their affixing can result in similar ambiguities to that produced by intransitive /ny/ deletion, e.g.:

(50) (a) nityi  
    nF  AnI  nAI  Past  
    AUXILIARY  CVS

They (3 or more) went last night.

(b) nityi  
    nF  AnI  AnI  3M  nAI  Past  
    AUXILIARY  CVS

They (3 or more) went to her last night.

However, there is no evidence to suggest that there is a positive principle eliminating subject number marking with the affixing of auxiliary non subject bound pronouns. The /ny/ which occurs before the auxiliary verb stem, for example, does not delete:

(52) a - kuwan  
    nF  AnI  Su  lie  AnI  Su  2M  nAI  Pres  
    AUXILIARY  CVS

There are (3 or more) snakes (lying) next to you.
Further, the direct object forms attaching to the auxiliaries I have labelled as simple verbs (see 5.1.4.) do take what can be analysed synchronically as subject number markers.(see 5.2.2.). With higher animate augmented non inclusive objects, goals and (intransitive) locative-allatives, subject number marking therefore appears not to be a high priority, but is certainly not systematically constrained. The data on /ny/ deletion would then seem best explained by proposing that for the three auxiliaries in which it appears finally it is not underlyingly prior to non subject affixes, but rather alternative to them. In other words, for these three formally intransitive auxiliaries, we have a /Ø~ny/ variation parallel to the /Ø~ngki/ variation for formally transitive auxiliaries, i.e. in the absence of a higher animate goal or locative-allative Ø marks intransitive minimal or augmented inclusive subject while /ny/ marks intransitive augmented non inclusive subject. Similarly, as we have seen with the direct object forms (and for the moment disregarding the overlap of third minimal higher animate and third other object affixes), in the absence of a higher animate goal or object, Ø marks transitive minimal or augmented inclusive subject, and /ngki/ transitive augmented non inclusive subject. For the remaining two intransitive auxiliaries, those glossed as "lie (down)" and "stand", in which the /ny/ morpheme precedes the auxiliary verb stem, /ny/ is not interpretable as filling the non subject pronoun slot and so can co-occur with non subject forms. This differential placing of /ny/ is possibly explained by proposing that the auxiliaries in which it occurs before the auxiliary verb stem functioned historically as complex intransitive verbs, i.e. themselves consisted of a subject morpheme, an auxiliary verb stem (possibly Ø or of some shape now eroded by phonological processes), the Ø or /ny/ intransitive morpheme (or a higher animate non subject pronoun), and then the complex verb stem, now reinterpreted as an auxiliary. With this reinterpretation higher animate non subject pronouns came to be affixed after rather before the historical complex verb stem; the general intransitive form of this originally complex verb, incorporating the /ny/ immediately after the augmented non inclusive subject pronouns, was taken over as the auxiliary subject-verb sequence, and /ny/ therefore did not have to appear a second time in the auxiliary following the new auxiliary verb stem.

As a final comment in this survey of the functions of the reflexive/goal/locative bound pronouns some identities of form and ambiguities should be considered. Firstly, the first exclusive minim-
al direct object form is identical to the third person feminine minimal non direct-object form (for subjects of any number.) This was illustrated in (27) above, in discussion of reflexives, and dis-ambiguation via a free form reflexive pronoun was shown in (28). Similarly, (53(a)) and (b) below would be ambiguous without free form pronouns indicating the non subject person cross-referenced in the auxiliary and thereby distinguishing the direct object from goal function:

(53) (a) yikin  ku - ti - n -  ing -  ∅ -  ∅ - a  
1ExcM  3A Su see  AnI  1ExcM  nAI Past  
nF  Su  Ob  nU  
AUXILIARY  CVS  

They (3 or more) saw me.  

(b) ngiya  ku - ti - n -  ing -  ∅ -  ∅ - a  
3M Fem  3A Su see  AnI  3M Fem  nAI Past  
nF  Su  hA G  nU  
AUXILIARY  CVS  

They (3 or more) looked for her.  

Secondly, first inclusive (with only one exception: the future form for minimal or augmented inclusive subject) and second minimal (for augmented non inclusive subject) show no variation in form for direct object and reflexive/goal/locative function. Thus any semantic difference elsewhere encoded in the variation between direct object and other auxiliary suffixes is neutralised in these cases, e.g.:

(54) ngangki - nim  ku - ti - n -  ingki -  ∅ - nim - a  
1Inc  A  3A Su see  AnI  1Inc  A  Past  
nF  Su  Ob  hA G  
AUXILIARY  CVS  

\{They (3 or more) saw us (inc., 3 or more).  
They (3 or more) looked for us (inc., 3 or more).\}  

(54) is only disambiguated contextually. Since neither direct object nor higher animate goal NPs of transitives take any case inflection free form pronouns cannot be used to differentiate the two readings of (54). Though this is a matter for further investigation it appears currently that there are not a large number of verbs able to take both object and goal affixes, and the type of ambiguity illustrated in (54) is therefore not a major problem in the language.
5.1.3.3. Transitivity

The data in the preceding two sections shows that in any clause the auxiliary cross-references only one non subject participant, and that this participant is selected according to the following hierarchy:

(55) Auxiliary Non Subject Participant Selection

<table>
<thead>
<tr>
<th>Transitive Aux.</th>
<th>Intransitive Aux.</th>
</tr>
</thead>
<tbody>
<tr>
<td>higher animate Goal</td>
<td>higher animate Locative-Allative Object</td>
</tr>
<tr>
<td>Reflexive/Direct</td>
<td></td>
</tr>
</tbody>
</table>

Thus higher animate goals are always coded in the auxiliary in preference to co-occurring reflexives and direct objects (see (32)-(37) above), and higher animate locatives and allatives are coded only in intransitive auxiliaries in the absence of higher animate goals, (see (47) and (48) above).

I have already suggested, in 5.1.3.2., semantic factors which distinguish higher animate goals from fully transitive direct objects. In order to understand the above hierarchy we shall have to consider the nature of transitivity in Marrithiyel in more detail. In Marrithiyel each auxiliary verb is formally transitive or intransitive. Formally transitive auxiliaries are distinguished by their obligatory affixing of a non subject bound pronoun with every complex verb stem with which they co-occur; if they take no higher animate goal or reflexive they must be marked as taking a direct object. Formally intransitive auxiliaries on the other hand never affix direct object forms, and while they may take the other non subject bound pronouns they do not do so with every complex verb stem with which they co-occur. There are five formally intransitive and ten formally transitive auxiliaries.

I have labelled auxiliaries as "formally" transitive or intransitive because at the present stage of my analysis it does not appear that formal transitivity or intransitivity entails the presence or absence of either an overt or understood object-like NP. There exist, for example, formally intransitive verbs which take NPs syntactically indistinguishable from transitive objects. Most of these examples involve cognate objects, i.e. entities created through the action of the verb:

(56) (a)weti - Ø ka - wu - ny - purpurp - Ø - a wangka
    3A nU 3A Su stand AnI dance nAI Past male dance
    nF Su nU
    AUXILIARY CVS

They (the men) (3 or more) were (sitting) dancing (a dance). (i.e. The men were sitting, getting up to dance one or two at a time.)
It may eventuate that with a more sophisticated syntactic analysis the apparent objects of the clauses in (56) can be separated from transitive direct objects and perhaps categorised with other classifiers and modifiers that cluster around the verb. But it seems less likely that the data in (57) will be able to be reanalysed in this manner; there we have NPs, with the semantic characteristics of objects, which are not, unlike those in (56), either created by the action of the complex verb stem or already partially coded by it.

(57) (a) a - purang a - purrilli karr - ki - ny - nity - Ø - Ø
   Cl wallaby Cl liver lExcA sit AnI eat nAI Pres
   1A 1A Su Su nU
   nF        AUXILIARY CVS
   We (exc., 3 or more) are sitting eating wallaby liver.

(b) kati - Ø a - mati kirri - ny - a - pirr - Ø - a
   lExcA nU Cl barra- lExcA AnI stand throw nAI Past
   1A mundi Su Su nU
   nF        AUXILIARY CVS
   angilinan
   hook
   We (exc., 3 or more) hooked barramundi.

Similarly, there exist certain complex verb stems which take transitive auxiliaries, but for which no object NP appears to exist. These auxiliaries affix the /Ø-ngki/ direct object forms, e.g.:

(58) (a) ki - ti - ngki - tyin - Ø - a tawun - nanga
   2A Su see 30b fall, be nAI Past town LOC-ALL
   nF AnI Su born nU
   AUXILIARY CVS
   You (3 or more) fell down/ were born in town.
(b) ngirri - nyi - ngki - put - Ø - wa atyirri
1ExcA PreVb 3Ob get nAI Fut later
Su AnI Su up nU
F AUXILIARY CVS

We (exc., 3 or more) will get up later.

(c) kini - rri - ngki - miyirryirr - pini - ya
2 Su PreVb 3Ob go crazy U Past
nF AnI Su
AUXILIARY CVS

Have you (2) gone crazy?

Now it is possible, since most of the examples of the type illustrated in (58) are concerned with bodily or organic actions and processes, that further investigation will reveal some culturally specific concept which provides for an understood object for the clauses of (58). However, until that is established, and until the object-like NPs of (56) and (57) are semantically distinguished from normal transitive objects, the existence of a direct object, for the purposes of applying the hierarchy of (55), must be stated as deriving from the transitivity of the auxiliary and not from the presence or absence of an object-like NP. We can incorporate into the hierarchy of (55) a specific instruction to affix the non higher-animate direct object forms to transitive auxiliaries in the absence of an overt or understood object. At the same time we can take up the suggestion in the preceding section (5.1.3.2.) that the /Ø~ny/ intransitive marker is underlyingly alternative to non subject bound forms, and include that too in the hierarchy. (55) is now expanded to:

(56) Auxiliary Final Morpheme Selection

<table>
<thead>
<tr>
<th>Transitive Aux.</th>
<th>Intransitive Aux.</th>
</tr>
</thead>
<tbody>
<tr>
<td>higher animate</td>
<td>Goal</td>
</tr>
<tr>
<td>Reflexive/Direct</td>
<td>higher animate</td>
</tr>
<tr>
<td>Object</td>
<td>Locative-Allative</td>
</tr>
</tbody>
</table>

/Ø~ngki/ Transitive /Ø~ny/ Intransitive (Subject (Subject Number) Marker Number) Marker

There is another way in which the existence of a direct object is bound up with auxiliary choice and transitivity. This concerns the access of undergoers to the subject position, which in Marri-thiyel is determined on semantic grounds. In general terms, any animate entity in control of an action must be subject, i.e. must be cross-referenced by the initial morpheme of the auxiliary. There is no morpho-syntactic device (such as the passive in English) for plac-
ing the undergoer in subject position in the presence of such a controlling entity. In the absence of such an entity, however, undergoers can assume subject status. Thus we have (60(a)) and (b), in which the choice, for the one complex verb stem, between undergoer as object, and undergoer as subject, and the consequent choice between transitive and intransitive auxiliaries, codes a volitional, controlled, as opposed to a non volitional uncontrolled, action. (60) exemplifies a widespread, if not productive, process in the language:

(60) (a) karrila ku - ti - ngki - pilpil - Ø - a wuti - nanga
    rock 3A Su see 3Ob roll nAI Past water LOC-ALL
    nF AnI Su nU
    AUXILIARY CVS

They (3 or more) rolled the rocks into the water.

(b) karrila ku - ni - ny - pilpil - Ø - a wuti - nanga
    rock 3A Su go AnI roll nAI Past water LOC-ALL
    nF Su nU
    AUXILIARY CVS

The (3 or more) rocks rolled into the water (via natural forces).

But the language specific demarcation of controlling entities is problematic. For example, in (61(a)), the undergoer is cross-referenced as subject and the cause of the action denoted by the source NP.

(61) (a) ka - ni - Ø - wurr - Ø - a wuti winytyani - nganan
    3M Su go M/AI die nAI Past water no good SCE
    nF Su nU
    AUXILIARY CVS

He died from bad (poisoned) water.

(b) ka - ni - Ø - wurr - Ø - a tyanti - nganan
    3M Su go M/AI die nAI Past spear SCE
    nF Su nU
    AUXILIARY CVS

*He died because of the spear (hitting him).

But: He died because of some attribute of the spear. (i.e. some magical property, exuding poison into the wound etc.)

(61(b)), however, cannot encode the first meaning provided above, but rather must be structured with a transitive auxiliary, as in (62(b))-(c), with its causal entity as subject and undergoer as object. The difference between (62(b)) and (c) has already been discussed in 3.1.; in (b) the unsuffixed /tyanti/ is instrument, and there is a human subject as the controlling entity. In (c) the ergative suffixing of /tyanti/ marks it as subject and brings a slightly different meaning to the clause.
(62) (a) *wuti winytyani ki - 1 - y - kurr - 0 - a
water water
3M Su PreVb 30b hit, nAI Past
nF M/AI Su kill nU
AUXILIARY CVS

The bad (poisoned) water killed him.

(b) tyanti ki - ny - 0 - kurr - 0 - a
spear
3M Su PreVb 30b hit, nAI Past
nF M/AI Su kill nU
AUXILIARY CVS

He killed him with a spear.

(c) tyanti - kin ki - ny - 0 - kurr - 0 - a
spear ERG 3M Su PreVb 30b hit, nAI Past
nF M/AI Su kill nU
AUXILIARY CVS

He killed himself on a spear (accidentally, i.e. fell on it).
He was killed by a spear (agent unknown, unseen).

It is perhaps not surprising that a typically instrumental entity such as /tyanti/, which normally functions as an extension of a controlling agent, should receive such priority for subject coding. However, such priority is also accorded to the non volitional causal entity of (63(c)):

(63) (a) nang yuwa ki - ny - ing - perri - wut - 0 - a
3M Masc that 3M Su PreVb lExcM foot walk nAI Past
nF Ob nU
M/AI Su
AUXILIARY CVS

ngi - tin - 0 - tyin - 0 - a
lExcM see 30b fall nAI Past
Su M/AI Su nU
nF AUXILIARY CVS

That fellow tripped me and I fell.

(b) ngi - tin - 0 - tyin - 0 - a thawurr - nganan
lExcM see 30b fall nAI Past tree, SCE
Su M/AI Su nU wood
nF AUXILIARY CVS

*I fell because of (tripping on) the log.

(c) thawurr - kin ki - ny - ing - perri - wut - 0 - a
tree, ERG 3M Su PreVb lExcM foot walk nAI Past
wood nF Ob nU
M/AI Su
AUXILIARY CVS

ngi - tin - 0 - tyin - 0 - a
lExcM see 30b fall nAI Past
Su M/AI Su nU
nF AUXILIARY CVS

The log tripped me and I fell.
I tripped and fell on the log.
As with (61) and (62), the undergoer (of the verb "trip") cannot be marked as subject in the presence of an NP apparently interpreted as agent-like; (63(b)) is ungrammatical with the meaning provided and (63(c)), structurally identical to (63(a)), which does have an animate, controlling subject, is the required structure.

The details of preference for subject selection, and the consequent conditions under which undergoer is cross-referenced as direct object, must remain matters for further study. But we can observe here that the language specific determination of the existence of a controlling entity involves the construction of what I have labelled as impersonal verbs; these are verbs for which no overt or understood subject NP exists, but in which the undergoer is still marked as direct object. With one exception, the non future /ki-ti/, which appears exclusively with impersonal verbs, these verbs are structured with the normal transitive auxiliaries. They are marked for third minimal subject. I have not yet found any impersonal verbs which code their undergoers as higher animate goals. Most of the examples of impersonal verbs collected thus far have denoted emotional or bodily states:

(64) (a) ki - ti - ing - wil - Ø - Ø yangi
3M Su PreVb 1ExCM heat nAI Pres now
nF (Impnl) Ob nU
M/AI Su
AUXILIARY CVS
I'm hot now.

(b) ku - mun - nyi - matyarr - Ø - a
3M Su paint 2M Ob be sad, nAI Past
nF M/AI Su sorry nU
AUXILIARY CVS
You (sg.) felt sad/sorry.

(c) ki - l - ing - pu - tiyerr - Ø - Ø
3M Su PreVb 1ExCM roast teeth nAI Pres
nF Ob nU
M/AI Su
AUXILIARY CVS
I've got toothache.

The absence of a subject NP for such verbs is illustrated in (65); (65(a)) shows (64(b)) extended to denote either the entity responsible for the emotional state, or the entity to which the state is directed. These entities would appear to be the most likely candidates for the subjecthood of (64(b)). However, (65(b)) shows that these NPs cannot be stripped of their case inflection and made subject; the attempt to generate the required person-number agreement between the
putative subject and the auxiliary in (65(b)) proves ungrammatical.

(65) (a) ku - mun -nyi - matyarr - ø - a kati - pini - wa
    3M Su paint 2M Ob be sad, nAI Past lExcA U
    nF M/AI Su sorry nU
    AUXILIARY   CVS

            You (sg.) felt sad/sorry for us (exc., 2).

(b) *kati - pini kirri - mu - n - impi - matyarr - pini - ya
    lExcA U lExcA paint AnI 2M Ob be sad, U Past
    Su Su sorry
    nF AUXILIARY CVS

Until a wider semantic analysis does reveal a recoverable subject for clauses such as those in (64) I am forced to propose a complicated format for lexical entries for complex verb stems. As we shall see in 5.1.4., each complex verb stem must have as part of its specification a list of the auxiliaries with which it can co-occur and a list of the meanings which result from the combination with each auxiliary. And, as discussed above, since each auxiliary is strictly formally transitive or intransitive, i.e. either obligatorily takes or fails to take direct object forms in the absence of a higher animate goal, the morphological transitivity of the verb as a whole follows from the choice of auxiliary. There is therefore never any problem as to whether to include a direct object marker in the auxiliary. Given the data of the type in (58) above, however, together with the general transitive structuring of impersonal verbs, there is some problem as to whether the undergoer is coded as object or subject; with the complex verb stem /tyin/, as in (58(a)), for example, which takes the transitive "see" auxiliary, undergoer is marked as subject and there is a dummy object. On the other hand, with the complex verb stem /matyarr/, as in (64(b)), which takes the transitive "paint" auxiliary, undergoer is marked as object and there is a dummy subject. This currently non-predictable variation in coding must be incorporated in the lexical entries. Thus we have something like:

(66) (a) tyin ... Complex Verb Stem

(1) "see" auxiliary + tyin = (a) fall down, over
    (b) be born
    Undergoer = Subject
(2) /nyi/ auxiliary + tyin = (a) knock down
    (b) fight
(b) matyarr ... Complex Verb Stem

(1) "paint" auxiliary + matyarr = be sad, sorry

Impersonal
(i.e. Undergoer = Object)

Note that the /ti/ auxiliary, insofar as it can be distinguished from /ti(n)/ "see" (see 5.2.3.), is used only in the impersonal construction. Thus the coding of undergoer as object is predictable from auxiliary choice in this case and, like specifications of transitivity, need not appear in the lexical entry. Thus (67(a)) unequivocally derives (67(b)):

(67) (a) minyirr ... Complex Verb Stem

(1) /ti/ auxiliary + minyirr = be thirsty

(b) ku - ti - ikiti - minyirr - Ø - wa
3M Su PreVb lExcA be thirsty nAI Fut
F' Ob nU
AUXILIARY CVS

We (exc., 3 or more) will be thirsty.

Further, since all auxiliaries (transitive and intransitive) are able to take higher animate goal affixes and since we currently cannot clearly delineate the semantic basis of goal affixation, both the requirement or possibility for a particular complex verb stem to affix goal forms to a co-occurring auxiliary and the semantic consequences of this affixation must also be included in the lexical entry, e.g.:

(68) (a) pup ... Complex Verb Stem

(1) Ø, auxiliary + Object + pup = put down
Ø auxiliary + hA G + pup = give

(b) tyang... Complex Verb Stem

(1) Ø auxiliary + n hA Ob + tyang = listen to (something)
Ø auxiliary + hA G + tyang = listen to (someone)

(c) mingity ... Complex Verb Stem

(1) "go" auxiliary + mingity = sneak away
"go" auxiliary + hA G + mingity = abandon (someone)
sneakily

One final comment on transitivity concerns the coding of reflexives with higher animate goal affixes rather than direct object forms. If, as I have suggested (5.1.3.2.), the object forms are reserved for maximally transitive agent-undergoer relationships, this is not surprising. Since a reflexive undergoer is also agent it cannot be
thought of as behaving in a typically object fashion, i.e. as a relatively passive and highly affected entity, and is therefore not cross-referenced by direct object forms. Rather than have a specific reflexive verbal affix Marrithiyel has opted to cross-reference reflexive objects with the forms for marking other core non subject non direct-object participants. It is of course not unusual for Australian languages to code reflexives in non transitive constructions (see Dixon, 1980, Ch 13).

5.1.4. Auxiliary Verb Stems

The fourth broad function of the auxiliary involves the classification or delineation of the verbal action or event. The auxiliary verb stem normally appears between the subject and non subject morphemes although, as mentioned in 5.1.1., in certain cases, most commonly the second minimal future/imperative form, the auxiliary verb stem and subject marker are not analysable as distinct segments, and the one morpheme conveys information about subject person-number and verbal semantics (see (3) in 5.1.1.). I have stated at the beginning of this section on verbal morphology that a Marrithiyel verb typically consists of an auxiliary prefixed to a verb stem suffixed for number and tense/mood; the full meaning of such a verb derives from the interaction between the verbal semantics of the stems within and following the auxiliary. However, as indicated in the formula in (1) above, the typical is not the minimal verbal structure; the stem which follows the auxiliary is not an obligatory constituent of the verb, and certain auxiliaries suffixed for number and tense/mood can function as verbs in their own right. The auxiliaries of (69) stand on their own as verbs, for example:

(69) (a) nati - pini na - ni - ny - Ø - pini - wa
2A U 2A Su go AnI U Fut
F Su
AUXILIARY CVS

Are you (2) going ?

(b) kirri - muyi - ngki - Ø - Ø - ya nityi - ngani
LExcA reach 30b nAI Past night body
Su AnI Su nU = morning
nF
AUXILIARY CVS

We (exc., 3 or more) arrived this morning.
But the auxiliary of (70) must co-occur with a separate verb stem; it is meaningless otherwise.

(70) (a) a - rri - Ø - pit - Ø - Ø
    2M Su PreVb 3Ob wash nAI Imp
    F            M/AI Su   nU
    AUXILIARY   CVS

    (You (sg).) wash it.

(b)*a - rri - Ø - Ø - Ø - Ø
    2M Su PreVb 3Ob nAI Imp
    F            M/AI Su   nU
    AUXILIARY   CVS

Of the fifteen auxiliary verbs nine can appear independently, as in (69). These nine are referred to in this study as "simple verbs". The remaining six can only occur in conjunction with a post auxiliary verb stem and for this reason are referred to as "pre-verbs". All pre-verbs and four of the simple verbs are formally transitive; the remaining five simple verbs are formally intransitive.

The five simple intransitive verbs can be glossed as "lie (down)", "stand", "sit", "go" and "go along, go past". The phonological shapes of the verb stems are discussed in 5.2.1. The first three of these verbs can only function on their own as statives; complex verbs, employing different auxiliary verbs, are required to express the corresponding dynamic meanings, e.g.:

(71) (a) ngoi - Ø - pal - Ø - Ø - a
    lExCM M/AI lie nAI Past
    Su Su nU
    AUXILIARY   CVS

    I was lying down.

(b) ngoi - n - Ø - paty - Ø - a
    lExCM go M/AI lie nAI Past
    Su Su down nU
    AUXILIARY   CVS

    I lay down.

(72) (a) ngangki - nim ngamp - u - Ø - Ø - nim - wa kan
    linc A linc Su sit M/AI A Fut here
    F            Su
    AUXILIARY   CVS

    We (inc., 3 or more) will be sitting here.

(b) ngangki - nim ngumpu - n - Ø - tyat - nim - wa kan
    linc A linc Su go M/AI sit A Fut here
    F            Su down
    AUXILIARY   CVS

    We (inc., 3 or more) will sit down here.
Those (3 or more) people were standing.

(b) nang yuwa 3M Masc that 3M Su stand M/AI smoke nAI Pres shit,
   nF Su nU tobacco
   AUXILIARY CVS

That man is standing smoking tobacco.

(c) nang yuwa 3M Masc that 3M Su sit M/AI smoke nAI Pres shit,
   nF Su nU tobacco
   AUXILIARY CVS

That man is sitting smoking tobacco.

Other complex verb stems refer to actions performable only in one of these orientations and consequently can occur with only one particular auxiliary verb. The stem /wul/, for example, takes only the "stand" auxiliary; similarly, the stem /tiritiri/ "swim" co-occurs exclusively with the "lie" auxiliary:

(75) (a) ngirri - ny - pal - tiritiri - ø - wa
   1ExcA Su AnI lie swim nAI Fut
   F Su nU
   AUXILIARY CVS

We (exc., 3 or more) will (have a) swim.
As a further refinement of this system we have complex verb stems which have no meaning as readily isolatable as the examples in (74) and (75), but rather interact with different auxiliaries to produce, at least in terms of the English gloss, verbs with quite different specific meanings:

(76) (a) watyan ka - ngi - Ø - palpaty - Ø - a dog lExcM sit M/AI ? nAI Past Su Su nU AUXILIARY CVS

I jumped over the dog.

(b) watyan - than ku - nga - Ø - palpaty - Ø - a dog ALL lExcM stand M/AI ? nAI Past Su Su nU nF AUXILIARY CVS

I ran towards the dog.

The determination of the semantic composition of a stem such as /palpaty/ can be problematic. The stem itself possibly denotes nothing more precise than rapid forward motion, with the auxiliary verb responsible for the finer delineation of verbal meaning. Note here that, at least in the case of (76(a)), the domain of the auxiliary verb is extended; it no longer overtly classifies an action as performed with the subject literally sitting, but rather marks the broad action of the complex verb stem as realised with the subject in a type of seated orientation, i.e. neither fully extended in the vertical "standing" dimension nor the horizontal "lying" dimension. Unlike the examples of (74), the overall meaning of the verb is thus no longer a simple conjunction of the independent meaning of the auxiliary with a discrete and relatively specific meaning of the complex verb stem.

The remaining two simple intransitive verbs I have glossed as "go" and "go along, go past": They are both in fact motional verbs neutral as to the direction of the action and can mean "go" or "come" according to context, e.g.:
(77) (a) muku many ka - ni - φ - φ - φ - ya nitin kan - nanga
    woman 2M 3M Su go M/AI nAI Past coun- this LOC-ALL
    =your nF Su nU try
    AUXILIARY CVS

Your (sg.) wife came to this country.

(b) ka - ni - φ - φ - φ - ya nitin yuwa - nanga
    3M Su go M/AI nAI Past country that LOC-ALL
    nF Su nU
    AUXILIARY CVS

She went to that camp.

The "go along" auxiliary is distinguished from the general motional
"go" by implying more rapid, prolonged and directed linear motion:

(78) (a) a - muning a - ngalpu ku - rri - ny - φ - φ - a
    Cl bird, Cl many 3A Su go AnI nAI Past
    1A feather 1A nF along Su nU
    AUXILIARY CVS

A lot of birds flew (straight) past.

(b) a - muning a - ngalpu ku - ni - ny - φ - φ - a
    Cl bird, Cl many 3A Su go AnI nAI Past
    1A feather 1A nF Su nU
    AUXILIARY CVS

A lot of birds were flying.

The semantic function of "go" as an auxiliary to a complex verb stem
is not completely clear. Some complex verb stems which can select the
"sit", "lie" or "stand" auxiliaries can also take the "go" auxiliary
to mark the action as performed in motion, or with a marked motional
element.

((79) ka - ni - ny - pipi - φ - ya wiyan
    3M Su go AnI smoke nAI Past shit,
    nF Su nU tobacco
    AUXILIARY CVS

He was going smoking tobacco.

(80) (a) karr - ki - ny - putputy - φ - a angilinan
    lExcA sit AnI throw a nAI Past hook
    Su Su line in nU
    AUXILIARY CVS

We (exc., 3 or more) were sitting fishing (i.e. in one spot).
"Go" otherwise appears to be the residual intransitive auxiliary, attaching to verbs categorised as intransitive but not able to be classified as wholly within the "sitting", "standing" or "lying" dimensions. As noted in 5.1.3.3., it operates as the general intransitivizing auxiliary, deriving the non controlled variant of complex verbs. And complex verb stems from many different semantic fields co-occur with the "go" auxiliary exclusively; general motional verbs, process verbs such as /wurr/ "die" and /wewe/ "vomit", statives such as /putin/ "to be sleepy" and /titil/ "to be rough, lumpy", and action verbs such as /tyaktyak/ "light a fire" and /tuty/ "pick up (non singular object)" are included among these stems.

The "go along" auxiliary does not appear frequently in discourse as a prefix to complex verb stems, and thus far there have only been a dozen or so stems which can take this auxiliary only. These are all stems of directed motion. There is some indication that the relationship between "go" and "go along" as independent verbs, illustrated in (78) above, extends to their function as auxiliaries:

(81) (a) ngi - n - Ø - mutying - Ø - a
1ExcM go M/AI listen nAI Past
Su Su nU
nF AUXILIARY CVS

I was listening (for a while).

(b) ngi - nyarr - Ø - mutying - Ø - a
1ExcM go M/AI listen nAI Past
Su along Su nU
nF AUXILIARY CVS

I went on/ kept on listening.

The precise productivity, however, of the variation from the "go" to the "go along" auxiliary, and the extension from the spatial to the temporal meaning, remains to be studied in detail.

The four simple transitive verbs are /ti(n)/ "see", /mu(n)/ "paint" (also now meaning "write"), /m(i)～pi/ "say, do" and /muyi～
Puyi/"reach". And the six pre-verb stems, all formally transitive, are Ā, /ny(i)/, /l(i)/, /rr(i)/, /nya/ and /ki(n)/. Note that the /nyi/ and /nya/ auxiliaries fall together in the augmented non inclusive, and the /li/ and /ki(n)/ auxiliaries have the same first minimal and third minimal future forms. As with the intransitive auxiliaries, the demarcation of the semantic domain of each complex and auxiliary verb stem can be a matter of some complexity. And again, as with the intransitives, while many stems can take a variety of auxiliaries others select one exclusively. I can therefore at this stage only point to some broad factors at work in auxiliary-verb stem combination. Each of the transitive auxiliaries is considered briefly below.

(a) /muyi~puyi/ and /nya/ are relatively minor auxiliaries, prefixing to only a few stems to produce essentially motional verbs.

(82) (a) pan ti ku muyi ₋ ma3i ₋ ₋
sun 3M Su reach 30b belly nAI Fut
nF M/AI Su nU
AUXILIARY CVS

The sun is rising.

(b) ngirri - nyi - ngki - put - Ā - wa
lExcA PreVb 30b stand nAI Fut
Su AnI Su up nU
F
AUXILIARY CVS

We (exc., 3 or more) will get up.

(b) /m(i)-pi/ most commonly prefixes to complex verb stems to derive experiential verbs taking higher animate goals:

(83) (a) tim - kingi - m - impi - tyangi - Ā - ya
bury lExcA say,do 2M ear nAI Past
Su hA G nU
nF M/AI Su
AUXILIARY CVS

I forgot about you (sg.).

(b) puty - kingi - m - Ā - ma3i - Ā - ya
possess lExcA say,do 30b belly nAI Past
Su M/AI Su nU
nF
AUXILIARY CVS

I was shocked.

(c) /ki(n)/ also combines with complex verb stems to derive experiential verbs. It frequently appears in the impersonal construction encoding bodily states:
(84) ki - kin - iny - nityi - ø - ya
3M Su PreVb 2M Ob night nAI Past
nF M/AI Su nU
AUXILIARY CVS

You (sg.) were tired.

(d) /ti(n)/ prefixes to complex verb stems to derive perceptual verbs such as "watch" and "recognise (by sight)", action verbs involving perceptual skills or monitoring such as "sharpen" and "pour out", and verbs compounded with /miri/ "eye", e.g. /miri-werrrr/ "frighten".

(85) (a) ki - tin - kiti - yilyil - pini - ya
3M Su see IExcA recognise U Past
nF Ob
M/AI Su
AUXILIARY CVS

He recognised us (exc., 2).

(b) nati - ø ki - ti - ngki - pu - ø - ya wuti
2A nU 2A Su see 3Ob pour out nAI Past water
nF AnI Su
AUXILIARY CVS

You (3 or more) poured out the water.

(e) /mu(n)/ as an auxiliary derives verbs generally denoting repetitive or continuous actions performed with up and down movements. Thus the verbs "smash (by repeated downward blows)", "paint all over", "sniff" and "fuck" all include the /mu(n)/ auxiliary:

(86) (a) ku - mu - ny - tyak - ø - wa mitti
3M Su paint 2M Ob paint nAI Fut dotted style
F M/AI Su all over nU
AUXILIARY CVS

He will paint you (sg.) all over dotted style.

(b) nang yuwa ku - mun - ti - pap - ø - a
3M Masc that 3M Su paint 2/3A fuck nAI Past
nF hA Ob nU
M/AI Su
AUXILIARY CVS

muku ngalpu
woman many

That man fucked a lot of women. (Impolite)

(f) The /ny(i)/ and /l(i)/ pre-verbs provide some specification of the dimensions of agent-instrument-undergoer contact or orientation in the action denoted by the complex verb stem. The /li/ auxiliary is
found in verbs involving the contact or juxtaposition of planes or surfaces. The /nyi/ auxiliary, on the other hand, occurs in verbs involving what appears to be conceived of as one dimensional contact, e.g. actions employing sticks, spears and knife edges (rather than blades).

The following minimal pairs illustrate this point:

(87) (a) ki - ny - ing - kurr - Ø - a  
3M Su PreVb lExcM hit, nAI Past  
nF Ob kill nU  
M/Al Su  
AUXILIARY CVS  
He hit me (with a stick, spear, his forearm etc.).

(b) ki - l - ing - kurr - Ø - a  
3M Su PreVb lExcM hit, nAI Past  
nF Ob kill nU  
M/Al Su  
AUXILIARY CVS  
He hit me (with a club, rock, his fist etc.).

(88) (a) a - purang  
Cl wallaby  
1A ki - ny - Ø - pipirr - Ø - a  
cl wallaby 3M Su PreVb 3Ob cut with nAI Past  
nF M/Al Su knife nU  
AUXILIARY CVS  
He skinned the wallaby (with the knife edge moving laterally away from his body).

(b) a - purang  
Cl wallaby  
1A ki - l - Ø - pipirr - Ø - a  
cl wallaby 3M Su PreVb 3Ob cut with nAI Past  
nF M/Al Su knife nU  
AUXILIARY CVS  
He chopped up the wallaby (with downward movements of a knife).

Note that in (87) the auxiliary verb specifies the instrument-undergoer orientation and does not contribute to coding the relative disposition of the subject. In (88) the situation is not so clear; the choice of pre-verb may be marking the differing orientation of subject to instrument, i.e. with the knife edge perpendicular to the agent's body in (a), but more facing the body in (b), or of instrument to undergoer, i.e. with the chopping of (b) necessitating surface to surface contact of the knife and the wallaby, but the skinning of (a) being conceptualised as an action taking place primarily at the knife edge. This is a matter for further investigation, as is the prefixing of the complex verb stem in (b) with the /li/ auxiliary rather than the /mun/ auxiliary, the semantic component of which (see (e) above) would also appear to be appropriate to this verb.

(g) The /rri/ auxiliary is found in verbs concerned basically with ac-
tions performed by hand. The verbs "touch", "grab", "wash", "make", "bury" and "drop" all include this auxiliary. Actions such as "forcing (someone to do something)", "stopping (oneself from doing something)" and "finishing" are also conceived of as hand-based actions and consequently take the /rrri/ auxiliary.

(89) (a) nityi - ngani ngu - rr - Ø - purrity - Ø - wa tyanti
    night body lExcM PreVb 3Ob make nAI Fut spear
    =morning Su M/AI Su nU
    AUXILIARY CVS

    Tomorrow (morning) I will make the spears.

    (b) ka - rri - ing - wil - Ø - a awu ngi - Ø - Ø - wuki - Ø - a
    3M Su PreVb lExcM force nAI Past meat lExcM Pvb 3Ob eat nAI Past
    nF Ob nU Su M/AI Su nU
    AUXILIARY CVS AUXILIARY CVS

    He forced me to eat the beef.

(h) The Ø pre-verb appears in verbs denoting physical ingestion and, in an apparent metaphorical extension of the physical function, verbs denoting actions conceptualised as involving taking something into the body. Thus there are verbs for "eating", "drinking" and "tasting" as well as verbs for "listen", "persuade" and "possess" which have the Ø auxiliary. Note that /pup/ "put down, give" also take this auxiliary.

(90) (a) a - wakirr ninti - Ø - Ø - tu - Ø - Ø
    Cl fish 2M Su PreVb 3Ob taste nAI Imp
    1A nF M/AI Su nU
    AUXILIARY CVS

    (You (sg.)) taste the fish.

    (b) ku - Ø - n - ingin - maluluk - Ø - a
    3A Su PreVb AnI lExcM persuade nAI Past
    nF Su hA G nU
    AUXILIARY CVS

    They persuaded me.

The zero shape of this proposed auxiliary verb might in fact prompt a theory that there is no auxiliary verb here, and that the auxiliary in examples such as (90) consequently makes no contribution to the semantics of the verb as a whole. This is a possible theory. Compare, for example, (90(a)) with (91), containing the same complex verb stem:
The theory that the postulated $\emptyset$ pre-verb has no semantic component would therefore necessitate proposing "taste" as the fundamental meaning for the complex verb stem /tu/ and explicating "touch" as "taste with the hands". This seems reasonable enough, but until the semantic priorities involved are clearly justified by wider data, I will retain the analysis of $\emptyset$ as functioning like other auxiliary verb stems.

It must be stressed that the above characterisations of auxiliary verb semantics are fairly elementary. Much work is still to be done on the finer explication of each auxiliary, the relationships between the auxiliaries, and the productivity of auxiliary prefixing to particular complex verb stems. For the moment we must assume that the lexical entry for each complex verb stem lists the auxiliaries with which it can co-occur and the meanings derived with each auxiliary.

5.2. Auxiliary Paradigms

Sections 5.2.1-4. table the subject-auxiliary verb stem forms for each of the auxiliaries. Sections 5.2.5-6. table the non subject auxiliary affixes.

As discussed in 4.5., number for first inclusive person is not marked in the auxiliary but is coded by the $\emptyset$ and /nim(pini)/ verbal suffixes. First inclusive number variation for intransitive subject, direct object and goal is illustrated in (92)-(94).

(92) (a) kimpī - $\emptyset$ - pal - $\emptyset$ - $\emptyset$
    lInc Su M/AI lie nAI Pres
    nF Su nU
    We (inc., 2) are lying down.

(b) kimpī - $\emptyset$ - pal - nim - $\emptyset$
    lInc Su M/AI lie A Pres
    nF Su
    We (inc., 3 or more) are lying down.

(93) (a) ngangki - $\emptyset$ pirri - mu - n - ingki - $\emptyset$ - wa
    lInc M 3A Su paint AnI lInc nAI Put
    F Su Ob nU
    They (3 or more) will paint us (inc., 2)
They (3 or more) will paint us (inc., 3 or more).

They (3 or more) will give it to us (inc., 2).

They (3 or more) will give it to us (inc., 3 or more).

There is therefore no need to list first inclusive augmented separately in the auxiliary paradigms. As also discussed in 4.5., first inclusive classes with the singulars rather than the non singulars for the purpose of cross-referencing subject number etc. and is therefore listed with them in the tables below.

Within the forms which are listed there are certain predictable variations. Throughout the paradigms the first inclusive non future subject morpheme varies from the future form only in the initial segment; the non future has an initial velar stop, the future an initial velar nasal, e.g.:

(95) **First Inclusive Subject Morphemes**

<table>
<thead>
<tr>
<th>&quot;sit&quot; Aux.</th>
<th>&quot;see&quot; Aux.</th>
<th>ø Aux</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future:</td>
<td>kamp</td>
<td>kumpu -</td>
</tr>
<tr>
<td>Non Future:</td>
<td>ngamp -</td>
<td>ngumpu -</td>
</tr>
</tbody>
</table>

The same relationship exists between first exclusive augmented future and non future subject morphemes. Further, the third augmented future subject morpheme always varies from the first exclusive augmented form only in the substitution of an initial bilabial stop for the initial velar.

(96) **First Exclusive Augmented Subject Morphemes**

<table>
<thead>
<tr>
<th>&quot;sit&quot; Aux.</th>
<th>&quot;see&quot; Aux.</th>
<th>ø Aux.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future:</td>
<td>karr -</td>
<td>ki -</td>
</tr>
<tr>
<td>Non Future:</td>
<td>ngarr -</td>
<td>ngu -</td>
</tr>
</tbody>
</table>

The third major pattern within the auxiliary forms concerns the relationship of the first exclusive minimal future subject morpheme with the third
minimal future subject form. Again there is a regular initial /k/ - /ng/ correspondence.

(97) **Minimal Future Subject Morphemes**

<table>
<thead>
<tr>
<th>&quot;sit&quot; Aux.</th>
<th>&quot;see&quot; Aux.</th>
<th>ØAux.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc:</td>
<td>nga -</td>
<td>nga -</td>
</tr>
<tr>
<td>3rd:</td>
<td>ka -</td>
<td>ka -</td>
</tr>
</tbody>
</table>

Note also that the auxiliary verb stem, which can show sporadic change of form elsewhere in the paradigm, is invariant for each of the patterns illustrated above. Thus the whole subject-auxiliary verb sequence is in these cases predictable in its variation, and the acquirer of the language, having deduced the pattern, is required to learn only ten of the fourteen subject-auxiliary verb stem forms for each auxiliary, being able to derive the remaining four.

In the paradigms which follow subject and auxiliary verb stem morphemes have been separated so as to give, in synchronic terms, the most systematic analysis of auxiliary structure. Until further research and comparative work reveals the history of Marrithiyel auxiliaries some of these segmentations must remain rather tentative and arbitrary. At the present stage of analysis inspection of the subject-auxiliary verb sequences outlined below reveals the following general shapes for the subject morphemes:

(98) **General Forms of Subject Morphemes**

### Non Future

<table>
<thead>
<tr>
<th>Minimal/Aug. Inc.</th>
<th>Aug. non Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngo [V]</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>kV, mpV,</td>
</tr>
<tr>
<td>2nd.</td>
<td>kini-</td>
</tr>
<tr>
<td>3rd.</td>
<td>Trans: ku-</td>
</tr>
<tr>
<td></td>
<td>Intrans: ka-</td>
</tr>
</tbody>
</table>

### Future

<table>
<thead>
<tr>
<th>Minimal/Aug. Inc.</th>
<th>Aug. non Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngo [V]</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>ngi [V]</td>
</tr>
<tr>
<td>2nd.</td>
<td>ni(n)ti/C</td>
</tr>
<tr>
<td></td>
<td>[-Velar]</td>
</tr>
<tr>
<td></td>
<td>[+Peripheral]</td>
</tr>
<tr>
<td></td>
<td>[-H]</td>
</tr>
<tr>
<td>3rd.</td>
<td>kV, mpV,</td>
</tr>
</tbody>
</table>

*First exclusive minimal non future is predominantly /ngi/. This assimilates to /ngu/ before a /Cu/ initial auxiliary verb stem. Note, however, that it does not assimilate before a /Cu/ initial complex verb stem (see 2.4.5.). The three exceptions to this general form are all velar stop*
rather than velar nasal initial. They are:

\[(99)\]

<table>
<thead>
<tr>
<th>lExcM Su (nF)</th>
<th>Aux. Vb. Stem</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;stand&quot; Aux.</td>
<td>ku - nga</td>
</tr>
<tr>
<td>&quot;sit&quot; Aux.</td>
<td>ka - ngi</td>
</tr>
<tr>
<td>&quot;say, do&quot; Aux.</td>
<td>kingi - m</td>
</tr>
</tbody>
</table>

A motivated account of this difference in form must await further study.

*First Inclusive* is /kV₁mpV₁/ for non future and /ngV₁mpV₁/ for future, where \(V₁ = /a/ \) or \(/u/.\) The two exceptions to this are again for the "sit" and "stand" auxiliaries. In these two cases I have analysed a following auxiliary verb stem consisting of a single vowel:

\[(100)\]

<table>
<thead>
<tr>
<th>lInc Su (nF)</th>
<th>Aux. Vb. Stem</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;stand&quot; Aux.</td>
<td>kump - a</td>
</tr>
<tr>
<td>&quot;sit&quot; Aux.</td>
<td>kamp - u</td>
</tr>
</tbody>
</table>

Note that the /a/ vowel in the initial syllable of the "sit" subject morpheme in \(100\) conforms to the pattern of /Ca/ initial subject forms for the "sit" auxiliary (a pattern broken only in the third minimal non future).

For the remaining auxiliaries it is not currently clear what determines the choice of \(V₁\) as /i/ or /u/; \(101\) below, in which \(C\) represents the initial consonant of an auxiliary verb stem only, is an attempt to formulate a phonological conditioning for \(V₁\). This is not particularly satisfactory, especially with respect to the determination of \(V₁\) as /u/ by a non peripheral consonantal auxiliary verb stem:

\[(101)\]

\[-C V \quad \text{ [+Hi]} \quad - C + \quad \text{ [-Peripheral]} \quad \rightarrow i \text{ elsewhere (i.e.)} \quad - C V \quad \text{ [-Hi]} \quad - C + \quad \text{ [+Peripheral]} \quad \rightarrow \emptyset \text{ PreVb.}\]

*Second non future* (both minimal and augmented) is generally /kini/.

There are three exceptions to this form: /kun/, the minimal form for the "stand" auxiliary, /kan/, the minimal and augmented form for the "sit" auxiliary, and /ki/, the augmented second person form for the "go" auxiliary, which appears to have been reduced from /kini/ by an extension of the process which has reduced the /CiIrri/ subject morphemes to /Ci/ prior to alveolar initial auxiliary verbs.
Third non future is /ka/ for minimal intransitive (except for /ku/ for "sit" and "stand") and /ki/ for minimal transitive (except /ka/ for the /rri/ Pre-verb), with /ki/ assimilating to /ku/ before a /Cu/ initial auxiliary verb stem. The third augmented non future is /ku/ for both transitive and intransitive auxiliaries (except /ka/ for "sit", and /ki/ for "say, do").

First exclusive augmented is /kirri/ for non-future and /ngirri/ for future. Third augmented future is /pirri/. The one exception to the /Cirri/ shape for these subject morphemes is /Carr/ for the "sit" auxiliary. /Cirri/ is reduced and assimilated to /Cil/ before the /li/ auxiliary verb, and simply reduced to /Ci/ before other alveolar initial auxiliary verb stems.

First exclusive minimal future is /ngV.(pV.)/ and third minimal future is /kVj(pVj)/, where Vj=/i/, /a/ or /u/, but pVj can only be /pi/ or /pu/. As discussed in the following sections, the second syllable of these subject morphemes appears when tense would otherwise be ambiguous within the auxiliary. The form of Vj cannot be plausibly analysed as being phonologically or grammatically (i.e. in terms of transitivity) conditioned. The one exception to this general form for these subject morphemes is in the /kin/ pre-verb, where they have the shape /Cupul/, and the subject morphemes appear to have been borrowed from the subject-auxiliary verb sequences of the /li/ auxiliary paradigm.

Second minimal future shows the most variation in form of any of the subject morphemes. Two general shapes can perhaps be extracted from the paradigms:

/ C V /, and /ni(n)ti /

Note that /w/ is included with the peripheral, non velar consonants here. The exceptions to these general shapes are /a/ for the /nyi/ pre-verb, /nginti/ for the "say, do" auxiliary, and /nunt/ and /nant/ for the "stand" and "sit" auxiliaries respectively.

Second augmented future is predominantly /na/, with /na/ assimilating to /nu/ before a /Cu/ initial auxiliary verb stem. The only exceptions are in the "lie" and "stand" auxiliaries, where the second augmented future subject morpheme takes the shape /nu/; in these two cases it precedes the /ny/ intransitive subject number marker.

5.2.1. Subject - Simple Intransitive Verb Forms

(102) gives the subject-auxiliary verb stem sequences for simple intransitive verbs. Three morphemes are indicated, with the /ŋ~ny/ morpheme, which is prior to the auxiliary verb stem in the "lie" and "stand" auxiliaries, and after it in the others, marking intransitive subject
number. The function and behaviour of this morpheme (note that it is deleted when it immediately precedes a non subject auxiliary affix) has been discussed in 5.1.1. and 5.1.3.2.-3.

(102) NON-FUTURE

<table>
<thead>
<tr>
<th>Minimal/Augmented Inclusive</th>
<th>lie down</th>
<th>stand</th>
<th>sit</th>
<th>go</th>
<th>go along/past</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngi-Ø-pal-</td>
<td>ku-Ø-nga-</td>
<td>ka-ngi-Ø-</td>
<td>ngi-n-Ø-</td>
<td>ngi-nyarr-Ø-</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>kimpi-Ø-pal-</td>
<td>kump-Ø-a-</td>
<td>kampu-Ø-</td>
<td>kumpu-n-Ø-</td>
<td>kimpi-nyarr-Ø-</td>
</tr>
<tr>
<td>2nd</td>
<td>kini-Ø-pal-</td>
<td>kun-Ø-a-</td>
<td>kan-ngi-Ø-</td>
<td>kini-n-Ø-</td>
<td>kini-nyarr-Ø-</td>
</tr>
<tr>
<td>3rd</td>
<td>ka-Ø-pul-</td>
<td>ku-Ø-wa-</td>
<td>ku-si-Ø-</td>
<td>ka-ni-Ø-</td>
<td>ka-yirr-Ø-</td>
</tr>
</tbody>
</table>

Augmented Non Inclusive

| 1st Exc.                    | kirri-ny-pal- | kirri-ny-a- | karr-ki-ny- | ki-ni-ny- | ki-rri-ny- |
| 2nd                         | kini-ny-pal- | kini-ny-a- | kan-ngi-ny- | ki-ni-ny- | kini-rri-ny- |
| 3rd                         | ku-ny-pal-   | ku-ny-a-   | ka-wu-ny-   | ku-ni-ny- | ku-rri-ny- |

FUTURE

<table>
<thead>
<tr>
<th>Minimal/Augmented Inclusive</th>
<th>lie down</th>
<th>stand</th>
<th>sit</th>
<th>go</th>
<th>go along/past</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>nga-Ø-pal-</td>
<td>nga-Ø-tya-</td>
<td>nga-wu-Ø-</td>
<td>ngu-n-Ø-</td>
<td>ngipi-nyarr-Ø</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>ngimpi-Ø-pal-</td>
<td>ngamp-Ø-a-</td>
<td>ngampu-u-Ø</td>
<td>ngampu-n-Ø</td>
<td>ngimpi-nyarr-Ø</td>
</tr>
<tr>
<td>2nd</td>
<td>ninti-Ø-pal-</td>
<td>nant-Ø-a-</td>
<td>nant-ι-Ø</td>
<td>wa-rri-Ø</td>
<td>pe-rri-Ø</td>
</tr>
<tr>
<td>3rd</td>
<td>ka-Ø-pal-</td>
<td>ka-Ø-tya-</td>
<td>ka-wu-Ø</td>
<td>ku-n-Ø-</td>
<td>kipi-nyarr-Ø</td>
</tr>
</tbody>
</table>

Augmented Non Inclusive

| 1st Exc.                    | ngirri-ny-pal- | ngirri-ny-a- | ngarr-ki-ny- | ngi-ni-ny- | ngi-rri-ny- |
| 2nd                         | nu-ny-pal-  | nu-ny-a- | na-wu-ny- | na-ni-ny- | na-rri-ny- |
| 3rd                         | pirri-ny-pal- | pirri-ny-a- | parr-ki-ny- | pi-ni-ny- | pi-rri-ny- |

The "lie", "go" and "go along, go past" auxiliaries are relatively regular. /pal/ is the predominant verb stem for "lie" and has only one variation, the third minimal non future /pul/. This variation distinguishes the third minimal non future from the third minimal future, /ka - Ø - pal/, and thus maintains the uniqueness for tense for each person within the auxiliary. The "go" verb stem is /n¬ni/, again with only one variant, /rri/, in the second minimal future/imperative; this /rri/ may have come from the "go along, go past" auxiliary. The /wa/ subject morpheme preceding /rri/
is identical to the second minimal future/imperative subject morpheme of the "see" auxiliary. The /n/-/ni/ variation in the verb stem appears to have no synchronic function; while this variation is broadly on a minimal/augmented inclusive vs. augmented non inclusive axis the shape of the verb stem is never responsible for number disambiguation.

There are three verb stem forms in the "go along, go past" auxiliary. /rri/ is the variant for augmented non inclusive subject. /yirr/ appears in the third minimal non future and the second minimal future imperative, and /nyarr/ elsewhere. It is of course possible, that /yirr/ and /rri/ have been derived from a former /nyarr(i)/; the plausibility of the mechanism and motivation for this must be a matter for further study. The /pV/ shape for the second minimal future/imperative subject morpheme is also found in the /li/ auxiliary.

The "go along, go past" auxiliary stands out among the intransitives insofar as having the disyllabic subject morphemes, /ngipi/ and /kipi/, in the first exclusive and third minimal future. The only apparent motivation is again maintenance of tense uniqueness; without the second syllable the first exclusive minimal future would be identical to the first exclusive minimal non future, /ngi - nyarr - Ø/. The third minimal future, however, is distinct for tense even without the second syllable of the subject morpheme, and the only motivation for its presence is the preservation of the regular correspondence between first exclusive and third minimal future forms. Note that the "say, do" and "reach" auxiliaries vary their verb stem from /mi/ and /muyi/ to /pi/ and /puyi/ in the first and third minimal future, apparently to distinguish tense; this variation, which I have analysed as occurring in the verb stems for those auxiliaries may have provided a phonological shape for what I have analysed as subject morpheme variation in the "go along, go past" auxiliary.

Note that the reduction of first exclusive augmented /kirri/ and second augmented /kini/ to /ki/ in the "go" non future auxiliary results in the only instance throughout the paradigms of the subject-auxiliary verb stem sequence being ambiguous as to person.

The "stand" and "sit" auxiliaries show a number of irregularities. The verb stem "stand" is variously /nga/, /tya/, /wa/ and /a/, and the verb stem "sit" /ngi/, /ki/, /gi/, /wu/ and tentatively /u/ and /i/. (The /u/ and /i/, marked as the "sit" auxiliary verb stems for first inclusive and second minimal future/imperative respectively, are found elsewhere in the paradigms as the final vowels of the subject morphemes for these persons.)
5.2.2. Subject - Simple Transitive Verb Forms

(103) NON-FUTURE

<table>
<thead>
<tr>
<th></th>
<th>see</th>
<th>write/paint</th>
<th>say/do</th>
<th>reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngi-ti-</td>
<td>ngu-mu-</td>
<td>kingi-m-</td>
<td>ngu-muyi-</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>kumpu-ti-</td>
<td>kumpu-mun-</td>
<td>kimpi-m-</td>
<td>kumpu-muyi-</td>
</tr>
<tr>
<td>2nd</td>
<td>kini-ti-</td>
<td>kini-mun-</td>
<td>kini-m-</td>
<td>kini-muyi-</td>
</tr>
<tr>
<td>3rd</td>
<td>ki-ti-</td>
<td>ku-mun-</td>
<td>ki-mi-</td>
<td>ku-muyi-</td>
</tr>
</tbody>
</table>

Augmented Non Inclusive

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ki-ti-</td>
<td>kirri-mu-</td>
<td>kirri-mi-</td>
<td>kirri-muyi-</td>
</tr>
<tr>
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<td>kini-ti-</td>
<td>kini-mu-</td>
<td>kini-mi-</td>
<td>kini-muyi-</td>
</tr>
<tr>
<td>3rd</td>
<td>ku-ti-</td>
<td>ku-mu-</td>
<td>ki-mi-</td>
<td>ku-muyi-</td>
</tr>
</tbody>
</table>

FUTURE

<table>
<thead>
<tr>
<th></th>
<th>see</th>
<th>write/paint</th>
<th>say/do</th>
<th>reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngu-ti-</td>
<td>ngu-mu-</td>
<td>ngi-pi-</td>
<td>ngu-puyi-</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>ngumpu-ti-</td>
<td>ngumpu-mun-</td>
<td>ngi-pli-m-</td>
<td>ngumpu-muyi-</td>
</tr>
<tr>
<td>2nd</td>
<td>wa-ti-</td>
<td>ma-</td>
<td>nginti-m-</td>
<td>ninti-muyi-</td>
</tr>
<tr>
<td>3rd</td>
<td>ku-ti-</td>
<td>ku-mu</td>
<td>ki-pi-</td>
<td>ku-puyi-</td>
</tr>
</tbody>
</table>

Augmented Non Inclusive

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngi-ti-</td>
<td>ngirri-mu-</td>
<td>ngirri-mi-</td>
<td>ngirri-muyi</td>
</tr>
<tr>
<td>2nd</td>
<td>na-ti-</td>
<td>nu-mu-</td>
<td>ni-mi</td>
<td>nu-muyi</td>
</tr>
<tr>
<td>3rd</td>
<td>pi-ti-</td>
<td>pirri-mu-</td>
<td>pirri-mi</td>
<td>pirri-muyi</td>
</tr>
</tbody>
</table>

(103) gives the subject-auxiliary verb sequences for simple transitive verbs.

Both /muyi/ "reach" and /m~mi/ "say, do" have a bilabial stop in place of the initial nasal in first exclusive and third minimal future. As mentioned in the previous section this variation maintains the auxiliary as distinct for tense for each person; /ngu - puyi/, /ku - puyi/ and /ki - pi/ are thus unambiguously future forms distinguished from /ngu - muyi/, /ku - muyi/ and /ki - mi/. Since the first exclusive minimal non future for "say, do" is /kingi - m/ the variation of the verb stem to /pi/ in the first exclusive minimal future is not synchronically necessitated by
tense clarification, but nevertheless takes place and maintains the regular correspondence in form of first exclusive and third minimal future.

The verb stems for "see" and "paint" are /ti\~tin/ and /mu~mun/, the final nasals occurring only in minimal non future and first inclusive forms. Note that the augmented non inclusive verb stems /ti/ and /mu/ are followed by object or goal affixes with in most cases an initial /n/ morpheme marking subject number, e.g.:

(104) (a) pi - ti - n - ing - ∅ - wa
    3A Su see AnI lExcM nAI Fut
    F Su Ob nU

    They (3 or more) will see me.

(b) pi - ti - n - kiti - ∅ - wa
    3A Su see AnI lExcA nAI Fut
    F Su Ob nU

    They (3 or more) will see us (exc., 3 or more).

But the clear absence of this /n/ morpheme from the goal/reflexive affixes (which cannot be explained by purely phonological processes), as in (105) below, and its unequivocal function as a subject number marker with other transitive verbs, leave us with no option of analysing it as part of the verb stem in cases such as (104) above.

(105) (a) ngi - ti - iwiny - ∅ - wa
    lExcA see 3A nAI Fut
    F hA G nU

    We (exc., 3 or more) will look for them (3 or more).

(b) kirri - mu - ikiny - ∅ - a
    lExcA paint lExcA nAI Past
    Su Refl nU

    We (exc., 3 or more) painted ourselves.

There is the possibility, though, that the verb stems were originally /tin/ and /mun/ and that the geminates produced when these stems preceded an /n/ subject number marker were reduced to a single consonant, thus leading to a reanalysis of the augmented non inclusive verb stems as /ti/ and /mu/. If this were the case, the spreading of the /ti/ and /mu/ stems to the non inclusive minimal future forms would still have to be explained. But this scenario does account for the presence of the /n/ morpheme prior to augmented non inclusive simple verb direct object affixes, and would suggest that this /n/ (which does not occur in the corresponding position for pre-verb object affixes - see 5.2.5.) is the former final segment of the auxiliary verb stem, reanalysed as a subject marker.
5.2.3. Subject - Pre-Verb Forms

(106) gives the subject-auxiliary verb sequences for pre-verbs. These show a few irregularities. The /nyi/ auxiliary verb stem becomes /ki/ in the first and third minimal future, a variation with no apparent synchronic motivation. And the augmented non inclusive /nya/ subject-auxiliary verb stem sequences are identical to those for /nyi/; since comparatively few verbs take the /nya/ auxiliary (see 5.1.4.) this falling together does not present any major problems. Also, the first exclusive and third minimal future of the /kin/ auxiliary are identical to first exclusive and third minimal future for the /li/ pre-verb; in these two cases, and also in the second minimal future/imperative, the verb stem /ki(n)/ is lost altogether. Additionally, the augmented non inclusive future and first exclusive augmented forms of the Ø and /rri/ pre-verbs are identical. These auxiliaries all co-occur with a relatively large number of verb stems, and it is not currently clear what consequences these identities have for the coding of verbal semantics.

The /kin/ pre-verb parallels the simple transitive verbs "paint" and "see" in the deletion of the final nasal in other than minimal non future and first inclusive forms.

The /nya/ and /li/ first exclusive and third minimal future subject morphemes stand out, as we have seen with the "go along" auxiliary, as being disyllabic. Again, the motivation for the appearance of the second syllable seems to be a maintenance of tense uniqueness within the auxiliary. Thus:

(107) /nya/ Auxiliary

ngi - nya - ... lExcM nF
ngiipi - nya - ... lExcM F
ki - nya - ... 3M nF
kiiipi - nya - ... 3M F

This motivation is not so apparent from the forms of the /li/ auxiliary:

(108) /li/ Auxiliary

ngi - l - ... lExcM nF
ngiupi - l - ... lExcM F
ki - l - ... 3M nF
kiiupi - l - ... 3M F

Of course it is quite plausible, but remains to be proved, that /ngupi - l/ and /kiiupi - l/ derive from former /ngiipi - l/ and /kiiipi - l/ by assimilation of the vowels of the subject morpheme to the following lateral, and that the motivation was therefore historically present. (Note that /ngupul/ and /kiiupul/ also appear in the /kin/ auxiliary paradigm, where they are not derived from the first exclusive and third minimal non future forms.)
(106) NON FUTURE

### Minimal/Augmented Inclusive

<table>
<thead>
<tr>
<th></th>
<th>nyi</th>
<th>nya</th>
<th>rri</th>
<th>li</th>
<th>kin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngi-Ø-</td>
<td>ngi-ny-</td>
<td>ngi-nya-</td>
<td>ngi-r-</td>
<td>ngi-l-</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>kimpi-Ø-</td>
<td>kumpu-ny-</td>
<td>kimi-nya-</td>
<td>kumpu-r-</td>
<td>kumpu-l-</td>
</tr>
<tr>
<td>2nd.</td>
<td>kini-Ø-</td>
<td>kini-ny-</td>
<td>kini-nya-</td>
<td>kini-r-</td>
<td>kini-l-</td>
</tr>
<tr>
<td>3rd.</td>
<td>ki-Ø-</td>
<td>ki-ny-</td>
<td>ki-nya-</td>
<td>ka-rr-</td>
<td>ki-kin-</td>
</tr>
</tbody>
</table>

### Augmented Non Inclusive

<table>
<thead>
<tr>
<th></th>
<th>nyi</th>
<th>nya</th>
<th>rri</th>
<th>li</th>
<th>kin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>kirri-Ø-</td>
<td>kirri-nyi-</td>
<td>kiri-rr-</td>
<td>kil-li-</td>
<td>kirri-ki-</td>
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<tr>
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<td>kini-nyi-</td>
<td>kini-ri-</td>
<td>kini-li-</td>
<td>kini-ki-</td>
</tr>
<tr>
<td>2nd.</td>
<td>ku-Ø-</td>
<td>ku-nyi-</td>
<td>ku-ri-</td>
<td>ku-li-</td>
<td></td>
</tr>
<tr>
<td>3rd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FUTURE

### Minimal/Augmented Inclusive

<table>
<thead>
<tr>
<th></th>
<th>nyi</th>
<th>nya</th>
<th>rri</th>
<th>li</th>
<th>kin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>nga-Ø-</td>
<td>nga-ki-</td>
<td>ngipi-nya-</td>
<td>ngu-r-</td>
<td>ngu-pul-Ø-</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>ngimpi-Ø-</td>
<td>ngumpu-ny-</td>
<td>ngimpi-nya-</td>
<td>ngumpu-r-</td>
<td>ngumpu-kin-</td>
</tr>
<tr>
<td>2nd.</td>
<td>ninti-Ø-</td>
<td>niti-nya-</td>
<td>kipi-nya-</td>
<td>a-rr-</td>
<td>pa-li-</td>
</tr>
<tr>
<td>3rd.</td>
<td>ka-Ø-</td>
<td>ka-ki-</td>
<td></td>
<td>ku-rr-</td>
<td>kupul-Ø-</td>
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### Augmented Non Inclusive

<table>
<thead>
<tr>
<th></th>
<th>nyi</th>
<th>nya</th>
<th>rri</th>
<th>li</th>
<th>kin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>ngirri-Ø-</td>
<td>ngirri-nyi-</td>
<td>ngirri-rr-</td>
<td>ngil-li-</td>
<td>ngirri-ki-</td>
</tr>
<tr>
<td>2nd.</td>
<td>na-Ø</td>
<td>na-nyi-</td>
<td>na-rr-</td>
<td>na-li-</td>
<td>na-ki-</td>
</tr>
<tr>
<td>3rd.</td>
<td>pirri-Ø</td>
<td>pirri-nyi-</td>
<td>pirri-rr-</td>
<td>pil-li-</td>
<td>pirri-ki-</td>
</tr>
</tbody>
</table>
5.2.4. Subject - Impersonal Verb Forms

Impersonal verbs have been discussed in 5.1.3.3. They are normally structured with the transitive auxiliaries of 5.2.2.-3., taking third minimal subject morphemes and coding the experiencer as direct object, e.g.:

(109) (a) ki - l - ing - munthirr - ø - ø
3M Su PreVb lExcM get cold nAI Pres
nF Ob nU

I'm getting cold.

(b) kupu - l - ing - munthirr - ø - wa
3M Su PreVb lExcM get cold nAI Fut
F Ob nU

I will get cold.

There is, however, one subject-auxiliary verb sequence used in impersonal constructions which is not in the paradigms given in 5.2.2.-3. This sequence is /ki-ti/, non future; the future form is /ku - ti/. The future form is identical to the third minimal future for "see", but the non future lacks the final nasal found in the "see" verb and selects pre-verb object affixes rather than the object forms selected by "see" and the other simple transitive verbs; compare (110) and (111):

(110) (a) ki - ti - ing - minyirr - ø - ø
3M Su PreVb lExcM be thirsty nAI Pres
nF (Impnl) Ob nU

I'm thirsty.

(b) ki - ti - ikiti - tyuk - muri - ø - wa
3M Su PreVb lExcA burn hand nAI Fut
F (Impnl) Ob nU

We (exc., 3 or more) will get burnt (on our hands).

(111) (a) ki - tin - ngi - ø - ya
3M Su see lExcM nAI Past
nF Ob nU

He saw me.

(b) ku - ti - n - kiti - ø - wa
3M Su see AnI lExcA nAI Fut
F Su Ob nU

He will see us (exc., 3 or more).
5.2.5. Non Reflexive Direct Object Affixes

(112) (a) **SIMPLE VERBS**

<table>
<thead>
<tr>
<th>Min./Aug. Inc. Object</th>
<th>Aug. non Inc. Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>nFUT</td>
<td>Fut</td>
</tr>
<tr>
<td>1st Exc.</td>
<td>-ngi</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>-ngki</td>
</tr>
<tr>
<td>2nd.</td>
<td>-nyi</td>
</tr>
<tr>
<td>High</td>
<td></td>
</tr>
<tr>
<td>3rd.Animate</td>
<td>Ø</td>
</tr>
<tr>
<td>3rd.other</td>
<td>Ø</td>
</tr>
</tbody>
</table>

(b) **PRE-VERBS**

<table>
<thead>
<tr>
<th>Min./Aug. Inc. Object</th>
<th>Aug. non Inc. Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Exc.</td>
<td>-ing</td>
</tr>
<tr>
<td>1st Inc.</td>
<td>-ingki</td>
</tr>
<tr>
<td>2nd.</td>
<td>-iny</td>
</tr>
<tr>
<td>High</td>
<td></td>
</tr>
<tr>
<td>3rd.Animate</td>
<td>Ø</td>
</tr>
<tr>
<td>3rd.other</td>
<td>Ø</td>
</tr>
</tbody>
</table>

Simple verbs take a slightly different set of object affixes to pre-verbs, as shown in (112). The /n/ subject number morpheme appears only for the augmented non inclusive subjects of simple verbs; a possible historic source for this difference has been suggested in 5.2.2. above. The simple verbs further take distinct first exclusive and second minimal and first inclusive object forms for non future minimal and augmented inclusive subjects, e.g. compare (113) with (114):

(113) ki - tin - nyi - yilyil - Ø - a
3M Su see 2M Ob recognise nAI Past

He recognised you (sg.).

(114) ki - l - iny - titip - Ø - a
3M Su PreVb 2M Ob bite nAI Past

He bit you (sg.).

There is some minor motivation for this variation in the first exclusive minimal and inclusive object affixes. In (115) and (116) the ambiguity
which would result from the nasal final simple verbs taking the pre-verb object forms is illustrated.

(115) /kumuninga/

(a) ku - mu - n - ing - ø - a  
3A Su paint AnI 1ExcM nAI Past  
nF Su Ob nU  

They (3 or more) painted me.

(b)* ku - mun - ing - ø - a  
3M Su paint 1ExcM nAI Past  
nF Ob nU  

He painted me.

But (c) ku - mun - ngi - ø - ya  
3M Su paint 1ExcM nAI Past  
nF Ob nU  

He painted me.

(116) /kitiningkiya/

(a) ki - ti - n - ingki - ø - ya  
3A Su see AnI 1IncOb nAI Past  
nF Su nU  

They (3 or more) saw us (inc., 2).

(b) *ki - tin - ingki - ø - ya  
3M Su see 1IncOb nAI Past  
nF nU  

He saw us (inc., 2).

But (c) ki - tin - ngki - ø - ya  
3M Su see 1IncOb nAI Past  
nF nU  

He saw us (inc., 2).

The maintenance of specific minimal/augmented inclusive object forms for minimal/augmented inclusive subject removes the possibility for ambiguity in these cases. Since free form pronouns could readily disambiguate the clauses above, however, this can not be regarded as a strong motivation. Note also that since the second minimal object affix varies in form for subject number it is not involved in the ambiguity illustrated above.

/ti/ can be analysed as marking higher animate augmented non inclusive in the object affixes; it also appears in free form pronouns where it has the same function. Similarly the first exclusive augmented /ki/, first inclusive /ingki/ and second minimal /iny/ would appear to be related to the free form pronouns /kati/ first exclusive augmented, /ngangki/ first inclusive and /nany/ second minimal (see 4.1.).
Note that the rule of triconsonant reduction (see 2.4.4.) applies when a three consonant cluster is produced, as in (116(c)) above:

(117)    \text{ki - tin - nki - } \emptyset - ya
3M Su see 1IncOb nAI Past nU
\rightarrow \text{ki-tin-ki-} \emptyset - ya \quad \text{(Triconsonant reduction, see 2.4.4.)}

He saw us (inc., 2).

5.2.6. Reflexive/Goal/Locative Affixes

(118) \begin{array}{|c|c|c|}
\text{nPut} & \text{Put} & \text{M/AI Refl/Goal/Loc} \\
\hline
1\text{st Exc.} & -ngin & -ngin /-n-\text{ingin} /-i\text{kiny} \\
1\text{st Inc.} & -ki & -\text{ingki} /-n-\text{ingki} ////// \\
2\text{nd.} & -impi & -impi /-n-\text{impi} /-\text{ininy} \\
3\text{rd. Fem} & -ngi & -\text{ing} /-n-\text{ing} \{ -\text{i\text{winy}} \\
\text{Masc.} & -ni & -\text{ini} /-n-\text{in} \}
\end{array}
\begin{array}{|c|c|}
\text{M/AI Subj.} & \text{AnI Refl/Goal/Loc} \\
\hline
\text{AnI Subj.} & \\
\end{array}

(a) SIMPLE TRANS. VERBS  
(b) OTHERS

With reflexive /goal/ locative affixes the simple transitive verbs again take slightly different minimal/augmented inclusive forms (when there is a minimal or augmented inclusive subject). These forms are generally contractions of the forms taken by pre-verbs. The only non-contracted form is the third minimal feminine /ngi/, whose shape can be accounted for by the same removal of ambiguity as illustrated in (115) and (116) above.

The rule of triconsonant reduction (2.4.4.) applies to the second minimal simple transitive form when it is preceded by a consonant, e.g.:

(119)    \text{ngi - tin - mpi - } \emptyset - ya
1\text{ExcM} see 2\text{M} nAI Past hA G nU
\rightarrow \text{ngi-tin-mpi-} \emptyset - ya \quad \text{(Triconsonant reduction)}

I looked for you (sg.).

5.3. Post Auxiliary Bound Pronouns

Higher animates in certain roles are verbally coded outside of the auxiliary in the slot between the complex verb stem and the number marker. To account for this the verb formula should be expanded to:

(120) \text{VB = +AUX. + CVS + POST AUX. PROS. + NUMBER + TENSE/MOOD}
The post-auxiliary pronoun slot itself consists of a person marker followed by a role marker:

(120) POST AUX. PRONOUN

\[
\begin{array}{cccc}
\text{Person Marker} & & \text{Role Marker} \\
\text{M/Al} & \text{AnI} & \text{Purposive} & \text{Other} \\
\text{1Exc.} & \text{ngin-} & \text{kiny-} & -\text{al} & -\text{a/1Inc.-} \\
\text{1Inc.} & \text{ngangk-} & ---- & -\text{al} & \text{2M-} \\
\text{2nd} & \text{p-} & \text{niny-} & \text{a/1Inc.-} & \text{anga} \\
\text{3rd Fem.} & \text{ng-} & \text{winy-} & \text{other} \\
\text{3rd Masc.} & \text{n-} & \text{winy-} & \text{elsewhere} \\
\end{array}
\]

Except for first inclusive and second minimal the person markers are almost identical to the higher animate goal/reflexive etc. forms discussed in the previous section. The first inclusive person marker is virtually the first inclusive free pronoun stem, /ngangki/. /p/ initial marking of second minimal is also found in some future auxiliary subject forms. As with the auxiliary pronouns, first inclusive number is not coded by any variation in form of the pronoun itself but is marked by separate verbal number affixes. This will be illustrated in the following discussion, and is considered in detail in 5.4.

The role markers are /al/ and /a~anga/. /al/ denotes what has been labelled in 3.1. as the purposive, i.e. it marks the entity towards whom an action is directed or on behalf of whom an action is performed (and which is not categorised as a higher animate goal). Such an entity can only be encoded in the verb if /a~anga/ role marking, which is examined below, is not required in this slot. Subject to this condition, pronominal purposive participants are obligatorily encoded in the verb with /al/ marking; higher animate non pronominal purposive NPs are optionally cross-referenced with /al/. Pronominal purposives can additionally be encoded as free form pronouns suffixed with the /wa/ purposive:

(122) (a) wa - rri - ø - ngin - al - ø - ø
     2M Su  go  3Ob 1ExcM PURP  nAl Imp
     F M/Al Su  nU

     nitin tuwarr - nanga (yikin - wa)
     country full LOC-ALL 1ExcM PURP

     (You (sg.)) go to the camp for me.

(b) nang kan pirri - mu - ngki - tyak - ngangk - al - nim - w
     3M this 3h Su paint 30b paint 1Inc PURP  A Fu
     Masc  F AnI Su  all over

They(3 or more) will paint this man for us (inc., 3 or more).
Like the nominal /wa/ inflection, /al/ marking also applies to the entities towards which emotional actions and states are directed:

(123) (a) maŋi ka - ni - ō - tyi - (ng - al) - ō - ō

(b) ku - mun - nyi - matyarr - winy - al - ō - ō

My belly is crying out for that (female) child.

You (sg.) feel sorry for them (3 or more). (Impersonal construction.)

Note that in (123(a)) the insertion in the verb of the optional pronominal purposive provides for gender specification of the otherwise neutral /yeri/.

The semantic function of the other role marker in this slot, /a-anga/, is not so clear. In the data recorded so far it appears most frequently in certain body process verbs, all of which take a body part for subject. The body part is then, in a sense, attributed with the action. In (124(b)) below the body part even acts as reflexive subject, and would therefore seem to be classified with the volitional animate agents to whom the reflexive is otherwise confined (see 5.1.3.2.). The post auxiliary pronoun specifies the entity in whom this action is taking place. This entity is additionally optionally specified by a free pronoun or NP preceding the body part. (The whole-part (generic-specific) structuring has been discussed in 4.4.)

(124) (a) (yikin) nguri ka - ni - ō - wurr - nging - anga - ō - ō

(My) penis is dead in me.

=My penis is limp and I can't get an erection.
(b) muku wurang ki - kin - ing - tyukul - ng - anga - ø - ya
woman leg 3M Su PreVb 3m Fem cramp 3M Role nAI Past nF Refl Fem Marker nU

The woman's leg cramped (itself) on her.
=The woman's leg was cramped.

The type of construction with /a~anga/ illustrated in (124) extends to
cognitive processes:

(125) ngangki - nim piyi ku - rri - iwiny - yanki - ngangk - a - nim- a
1Inc A head 3A Su PreVb 3A think 1Inc Role A Past nF Refl Marker

    muku        - wa
woman that   PURP

We (inc., 3 or more) were thinking about that woman.

As shown in (125) these verbs can also take purposive NPs denoting the
entity to whom, rather than in whom, the action is directed. In the
presence of /a~anga/ marking, however, purposive NPs cannot be cross-
referenced with /al/ marking; compare (126(a)) and (b).

(126) (a) yikin nguri
1ExcM penis

    ku - ø - wa - wayeni - nqin - anga - ø - ø
3M Su M/AI stand stand up 1ExcM Role nAI Pres nF Su straight Marker nU

    nany - wa
2M PURP

My penis erect for you (sg.).
=I'm aroused by you.

(b) *yikin nguri
1ExcM penis

    ku - ø - wa - wayeni - (nqin - anga) - p - al - ø - ø
3M Su M/AI stand stand up 1ExcM Role 2M PURP nAI Pres nF Su straight Marker nU

    nany - wa
2M PURP

My penis is erect for you.

Marrithiyel also has body process verbs which mark the experiencer
as a direct object. These were illustrated in 5.1.3.3. These verbs do
not additionally code the experiencer as a post-auxiliary /anga/ marked
pronoun, e.g.:
I've got a headache/hangover.

Have you (sg.) got a toothache?

Your bones are aching.

While a great number of examples will be required to establish precisely the factors which determine the categorisation of body processes with /anga/ pronouns rather than with direct object forms, the data here perhaps allows us to suggest that /anga/ processes are distinguished by the relative isolatability of their action and effect. Given that Marrithiyel generally reserves direct objecthood for undergoers of highly transitive actions (see 5.1.2.-3.), this relative ability of the experiencer to detach himself from the process at work in his body may be a sufficient criterion for coding him with a non object form. Even if this explanation is fundamentally correct, the question as to why a post-auxiliary pronominal marking is used in preference to a higher animate goal form still remains.

5.4. Participant Number Marking

Apart from the first inclusive, bound pronouns, both within the auxiliary and in the post auxiliary position, vary on a minimal/augmented axis. A separate set of affixes, occupying the slot in the verb immediately after the post-auxiliary pronouns, provide further number-specification, overtly coding unit, trial and first inclusive augmented. These affixes are identical in form and function to those which suffix to free form pronouns, and have already been discussed in some detail in 4.5. Following the analysis arrived at in that section we can represent this post-verbal number marker as itself consisting of two slots. The function of each slot, and the affixes which can fill them, are given below.
(128) VERBAL NUMBER AFFIX

= First Inc. No. Marker + Restricted Aug. No. Marker

<table>
<thead>
<tr>
<th>1Inc</th>
<th>Augmented</th>
<th>Unit</th>
<th>Trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>ø</td>
<td>-nim</td>
<td>-(pini)</td>
<td></td>
</tr>
<tr>
<td>ø</td>
<td>ø</td>
<td>-pini</td>
<td>-(nimpini)</td>
</tr>
</tbody>
</table>

These affixes enumerate all participants coded by bound pronouns, except for non higher-animate direct objects. In other words, they apply to all subjects, higher animate direct objects, and higher animate goals, locative-allatives, purposives and /anga/ marked pronominals. (129) thus has only one interpretation; /pini/ cannot apply to the inanimate object:

(129) muku ku ti ngki - pini - ya karrila
woman 3A Su see 30b U Past rock
AnI Su

The two women saw the rock(s).
*The (two) women saw the two rocks.

These inanimates do, however, take /pini/ enumeration when in subject position:

(130) karrila (tyityukini) ku - ni - ny - pilpil - pini - ya
rock two 3A Su go AnI roll U Past
nF Su

peterr - nanga
river LOC-ALL

The two rocks rolled into the river.

The number marking restriction at work here is also seen within the auxiliary, where the pronominal forms cross-referencing subjects of all types vary for number but where the non higher-animate direct object forms are unmarked for their own number, instead varying in form according to subject number (see 5.1.3.1.).

The first slot in the verbal number affix, as shown above, is filled by /nim/ or ø. /nim/ appears obligatorily when any first inclusive participant coded by a bound pronominal form is augmented. Otherwise, i.e. for non augmented-inclusive, there is a zero affix. Since first inclusive always has a unique (i.e. unambiguous) bound pronominal form, and since first inclusives can only co-occur in reflexive verbs, there is never any ambiguity involved in /nim/ suffixation.

The second slot in the verbal number affix has the function of restricting augmented number; it can be filled by /pini/, /nimpini/ or ø. /pini/ is the unit affix, denoting the minimal numerical reference of an augmented form, i.e. 3 in the case of first inclusive, and 2 for the other augmenteds. /nimpini/ is the trial affix; as in the free form pronouns, it cannot follow /nim/.
Conditions for the verbal suffixation of /pini/ and /nimpini/ are largely the same as for its suffixation to free form pronouns. /pini/ is obligatory in its role as a dual, i.e. it must appear if any subject or higher animate non subject participant coded in the verb is both augmented and non first-inclusive. When more than one such participant is present /pini/ could be interpreted as applying to either or to both. In such cases free form pronouns are normally placed in the clause to clarify the number reference. Since /pini/ is also obligatorily suffixed to augmented free form pronouns referring to two higher animates its verbal suffixation in the presence of free pronouns is unambiguous.

(131) (a) (weti - pini) pirri - nyi - iti - tyip - pini - wa
3A U 3A Su PreVb 2/3A spear U Fut
F hA Ob

nati - Ø
2A nU

They (2) will spear you (3 or more).
*They (2) will spear you (2).

(b) weti - pini pirri - nyi - iti - tyip - pini - wa
3A U 3A Su PreVb 2/3A spear U Fut
F hA Ob

nati - pini
2A U

They (2) will spear you (2).

/pini/ is optionally suffixed to the augmented first inclusive free pronoun /ngangki-nim/ to mark the unit/trial; however, if it appears on the pronoun it must be copied in the verb, and, conversely, if it appears on the verb following /nim/ (where its suffixation in the absence of the first inclusive free form pronoun is optional) it must appear on the free form pronoun. Thus in (132) below the post-verbal /pini/ can only be interpreted as applying to the object, and not to the first inclusive subject.

(132) ngangki - nim (weti - pini)
1Inc A 3A U

kumpu - tin - ti - nim - pini - ya
1Inc Su see 2/3A A U Past
nF hA Ob

We (inc., 3 or more) saw them (2).
*We (inc., 3 only) saw them (2).

Since /pini/ is the only obligatory affix in this slot, and only obligatory with augmented non first-inclusive units, a Ø affix in its place indicates the absence of augmented non first-inclusive units, i.e. marks each of the bound pronouns as non unit and non augmented inclusive.
/nimpini/ is optionally suffixed to the verb to mark subject or a verbally coded non subject higher animate as trial. It only applies to such participants which are augmented and non first-inclusive. As with /pini/, when /nimpini/ is able to apply to more than one participant free form pronouns are normally placed in the clause. And while /nimpini/ can be said to be generally an optional pronominal verbal suffix its appearance on a pronoun requires it to be copied in the verb, and its appearance in the verb in turn requires it to be copied on the relevant pronoun. This copying rule provides the necessary disambiguation:

(133) (a) weti - Ø pirri - nyi - iti - tyip - nimpini - wa
      3A  nU  3A Su  PreVb  2/3A  spear  Trial  Fut
      F                  hA Ob

      (nati - nimpini)
      2A    Trial

      They (3 or more) will spear you (3).
      *They (3 only) will spear you (3).

(b) (weti - nimpini) pirri - nyi - iti - tyip - nimpini - wa
      3A    Trial  3A Su  PreVb  2/3A  spear  Trial  Fut
      F                  hA Ob

      nati - Ø
      2A    nU

      They (3) will spear you (3 or more).
      *They (3) will spear you (3 only).

There is one constraint in the coding of trials: /nimpini/ cannot follow /nim/. This restriction on the sequence of the actual morphemes perhaps stems from a desire to maintain /nimpini/ as a trial rather than a "minimal plus one" number suffix. Thus the two morphemes cannot progressively modify a first inclusive participant; (31(a)) and (b) from 4.5. are repeated here to illustrate this point:

(134) (a) *ngangki - nim - nimpini
      1Inc    A    Trial

      kumpu - tin - Ø - nim - nimpini - ya
      1Inc Su  see  3Ob    A    Trial  Past
      nF       M/AI Su

      We (inc., 4) saw it.

(b) ngangki - nim tyityukini tyityukini
      1Inc    A    two    two

      kumpu - tin - Ø - nim - a
      1Inc Su  see  3Ob  A    Past
      nF       M/AI Su

      We (inc., 4) saw it.
/nimpini/ is still prevented from following /nim/ when the two provide number specification for different participants. (135(a)) is ungrammatical; the option to specify a verbally coded augmented participant as trial cannot be exercised in the presence of an augmented first inclusive participant also cross-referenced in the verb. (135(b)) provides an alternative structure, assigning, the numeration of the third person participant to an adjoined clause:

(135) (a) *ngangki - nim
1Inc A
ngumpu - mun - Ø - it - winy - al - nim - nimpini - wa
1IncSu paint 3Ob pick up 3A PURP A Trial Fut
nF M/AI Su
weti - nimpini yuwa - wa
3A Trial that PURP

We (inc., 3 or more) will pick it up for those 3 (higher animates).

(b) ku - tiny - meri - nimpini yuwa /
3ns nsCl man Trial that
male
ngangki - nim ngumpu - mun - Ø - it - winy - al - nim - wa
1Inc A 1IncSu paint 3Ob pick 3A PURP A Fut
nF M/AI Su up

Those three men, we (inc., 3 or more) will pick it up for them.

But note that both (136(a)) and (b) are acceptable. (136(a)) is straightforward; the free first inclusive pronoun is clearly minimal, and the /nimpini/ verbal suffix must therefore apply to the only remaining augmented higher animate participant coded in the verb. In (136(b)) both the subject and the purposive NP take trial affixes; the appearance of /nimpini/ after the verb stem therefore formally satisfies all the copying rules.

(136) (a) ngangki - Ø
1Inc M
ngumpu - mun - Ø - it - winy - al - nimpini - wa
1Inc Su paint 3Ob pick up 3A PURP Trial Fut
F M/AI Su

We (inc., 2) will pick it up for the three of them.

(b) ngangki - nim - pini
1Inc A U
ngumpu - mun - Ø - it - winy - al - nimpini - wa
1Inc Su paint 3Ob pick up 3A PURP {Trial} Fut
F M/AI Su {A - U}
weti - nimpini yuwa - wa
3A Trial that PURP

We (inc., 3) will pick it up for those three (higher animates).
It could be objected that employing /nimpini/ as the sole verbal number affix in (135 (a)) would also satisfy the copying rules, at once repeating the /nim/ suffix of the subject and the /nimpini/ marking of the purposive NP, and should therefore make the clause grammatical. This is not the case; if only /nim/, and not /nimpini/, is copied onto the verb from a first inclusive participant then a /pini/ in the following number slot can be interpreted only as a dual affix, and not as part of the trial affix. Thus (137(a)) is unacceptable, whereas (137(b)) is perfectly acceptable.

(137) (a) *ngangki - nim
   1Inc A
   ngumpu - mun - Ø - it - winy - al - nimpini - wa
   1IncSu paint 3Ob pick up 3A PURP Trial { A - }
   nF M/AI Su
   weti - nimpini yuwa - wa
   3A Trial that PURP
   We (inc., 3 or more) will pick it up for those 3 (higher animates).

(b) ngangki - nim
   1Inc A
   ngumpu - mun - Ø - it - winy - al - nim - pini - wa
   1IncSu paint 3Ob pick up 3A PURP A U Fut
   nF M/AI Su
   weti - pini yuwa - wa
   3A U that PURP
   We (inc., 3 or more) will pick it up for those 2 (higher animates).

In summary, then, a verbally suffixed /nimpini/ has two basic interpretations; it is either a trial suffix, applying to one or more participants (any of whom may be first inclusive), or it is interpreted as /nim+pini/ i.e. augmenting a first inclusive participant and acting as a unit affix for other participants. It cannot be interpreted as simultaneously augmenting a first inclusive participant and acting as a trial for a different participant or participants.

The role of free form pronouns in clarifying the application of the verbal number affix extends to clauses which have non-pronominal higher animate participants, where they can appear appositionally to the non pronominal NPs. e.g.:

(138) ma - pintipinti weti - pini
    nsCl old man 3A U
    male

    pirri - nyi - iti - tyip - pini - wa muku
    3A Su PreVb 2/3A spear U Fut woman
    F ha Ob

    The two old men will spear the (3 or more) women.
    *The two old men will spear the two women.
Alternatively, these NPs can be enumerated with the free form numerals, /tyityukini/ "two" and /nimpini/ "three". /nimpini/ is optionally copied in the verb when employed as a free numeral.

(139) (a) ma - pintipinti tyityukini
    nsCl old man two
    pirri - nyi - iti - tyip - pini - wa muku
    3A Su PreVb 2/3A spear U Fut woman
    F hA Ob

    The two old men will spear the (3 or more) women.
    *The two old men will spear the two women.

(b) ma - pintipintil nimpini
    nsCl old man three
    pirri - nyi - iti - tyip - (nimpini) - wa muku
    3a Su PreVb 2/3A spear Trial Fut woman
    F hA Ob

    The three old men will spear the (3 or more) women.
    *The three old men will spear the (3 only) women.

These NPs are not obligatorily marked for number; the free numerals or appositional pronouns only appear when clarification is necessary or for stylistic reasons.

Non higher-animate NPs can only be enumerated by the /pini/ and /nimpini/ verbal affixes when in subject position. They cannot be cross-referenced by appositional free form pronouns, which generally can only refer to higher animates (see 4.1.), but they can take the free numerals, and in fact normally do so when the verbal number marking is otherwise ambiguous.

In the absence of disambiguation by NP number marking informants tend to interpret verbal /pini/ and /nimpini/ as applying to non-subjects rather than subjects; the glosses in (140) represent the interpretations favoured by informants. Note that this means that higher animates are read as enumerated rather than non-higher-animates:

(140) (a) a - kuwan ku - li - iti - titip - pini - ya muku yuwa
    C1 snake 3A Su PreVb 2/3A bite U Past woman that
    1A nF hA Ob

    The (3 or more) snakes bit those two women.

(b) muku ku - Ø winy - pup - pini - ya meri
    woman 3A Su PreVb 3A give, U Past man
    nF hA G put down

    The (3 or more) women gave it to the two men.

(c) meri ku - nyi - iti - tyip - nimpini - ya muku
    man 3A Su PreVb 2/3A spear Trial Past woman
    nF hA Ob

    The (3 or more) men speared the three women.
Clauses such as those in (140), however, when the application of the number affix is not contextually determined, have a dubious status and are regarded as somewhat odd by informants. Note that the unmarked interpretation of the number affixes of (140) is decidedly not to read them as applying simultaneously to subject and non-subject participants.

5.5. Tense/Mood

(141)

<table>
<thead>
<tr>
<th>Auxiliary Form</th>
<th>Tense/Mood Affix</th>
</tr>
</thead>
<tbody>
<tr>
<td>non Future</td>
<td>Ø Present - (y)a Past</td>
</tr>
<tr>
<td>Future</td>
<td>Ø Imperative - wa Future</td>
</tr>
</tbody>
</table>

Tense/mood information is conveyed in two ways in the Marrithiyel verb: by the form of the auxiliary (and primarily within the auxiliary by the form of the subject morpheme), and by the verb final morphemes given in (141). As discussed in 5.1., auxiliaries vary along a future/non-future axis. Present tense is then marked by the combination of a non-future auxiliary and a zero affix, while past tense involves a non-future auxiliary in combination with a - (y)a final morpheme. (/ - y a/ occurs after vowels, and /-a/ elsewhere.) The non future tenses can also have an habitual meaning, as in (142).

(142) (a) yeri kunytyunguny ka - rri - Ø - purrity - Ø - Ø
Cl boomerang 3M Su PreVb 30b make nAI Pres
Wp nF M/AI Su nU

{He's making a boomerang.}
{He makes boomerangs.}

(b) yeri kunytyunguny ka - rri - Ø - purrity - Ø - a
Cl boomerang 3M Su PreVb 30b make nAI Past
Wp nF M/AI Su nU

{He made/was making a boomerang.}
{He used to make boomerangs.}

A future auxiliary in combination with a final /-wa/ denotes future tense. This future suffix is homophonous with the purposive case inflection (see 3.1.).

(143) yeri kunytyunguny ku - rr - Ø - purrity - Ø - wa
Cl boomerang 3M Su PreVb 30b make nAI Fut
Wp F M/AI Su nU

He will make a boomerang
The imperative is formed with second person future auxiliaries and a zero tense/mood affix. A hortative is correspondingly formed with a zero tense/mood affix in combination with a first inclusive future auxiliary.

(144) (a) yeri kuntyunguny a - rri - ø - purrity-ngin - al- ø- ø
Cl boomerang 2M Su PreVb 3Ob make 1ExcM PURP nAI Imp
Wp F M/AI Su nU

(You (sg.)) Make a boomerang for me.

(b) na - rri - ngki purrity-ngin - al - ø - ø
2M Su PreVb 3Ob make 1ExcM PURP nAI Imp
F AnISu nU

(You (3 or more)) Make it for me.

(c) ngumpu - rr - - ø - purrity - nim - ø
1Inc Su PreVb 3Ob make A Imp
F M/AI Su

Let's (inc., 3 or more) make it.

The imperatives - hortatives are suffixed for number in the usual manner. As discussed in 5.1.2., because second person auxiliaries always have a unique future form there is no tense-mood ambiguity involved in having a zero affix for both imperative and present.

A temporal modifier, /tyan/ "now", can be incorporated in the verb immediately prior to the tense-mood suffix to more precisely delimit the temporal reference of the action:

(145) (a) ka - ni - ø - ø - ya
3M Su go M/AI nAI Past
nF Su nU

He went./ He's gone (unspecified past).

(b) ka - ni - ø - ø - tyan - a
3M Su go M/AI nAI now Past
nF Su nU

He's just gone (immediate past).

(146) (a) ka - ni - ø - ø - ø
3M Su go M/AI nAI Pres
nF Su nU

He's going (preparing, intending, beginning to).

(b) ka - ni - ø - ø - tyan - ø
3M Su go M/AI nAI now Pres
nF Su nU

He's going now (actually doing it).

(147) (a) ku - n - ø - ø - wa
3M Su go M/AI nAI Fut
F Su nU

He will go (unspecified future).
(b) ku - n - Ø - Ø - tyan - wa  
3M Su go M/AI nAI now Fut  
F Su nU

He will go now (immediate future).

(148) (a) na - ni - ny - paty - Ø - Ø  
nityi - ngani  
2A Su go AnI lie down, nAI Imp night body  
F Su move camp nU =morning

(You (3 or more)) move camp in the morning.

(b) na - ni - ny - paty - Ø - tyan - Ø  
2A Su go AnI lie down, nAI now Imp  
F Su move camp nU

(You (3 or more)) move camp immediately.

5.6. Complex Verb Stems

The complex verb stem normally occurs immediately after the (obligatory) auxiliary. The meaning of the verb is determined primarily by the complex verb stem, with finer delineation or classification of the action coming from the auxiliary verb stem, as discussed in 5.1.4. Some complex verb stems may also occur verb initially, i.e. prefixed to the auxiliary. One stem, /tyatya/, simply precedes what are essentially /rri/ auxiliary forms (the only difference is that the pre-verb stem becomes /rri/ throughout the paradigm rather than the /rr/ found in some of the minimal forms). Nothing appears in the post-auxiliary verb stem slot; the resultant verb means "want, like":

(149) (a) ap wiyan tyatya - ngi - rri - ngki - pini - wa nityi  
per- shit, want,like lExCA PreVb 3Ob U Fut night haps tobacco Su AnI Su  
F

Perhaps we'll want some tobacco tonight.

(b) muku yuwa tyatya - ngi - rri - Ø - Ø - Ø  
woman that want,like lExCM PreVb 3Ob nAI Pres  
Su M/AI Su nU  
F

I like that woman.

When in the usual complex verb stem position /tyatya/ can be prefixed only with the "see" auxiliary, which itself must be in reflexive form.

(150) ngiya ki - tin - ngi - tyatya - Ø - Ø  
3M Fem 3M Su see 3M Fem like,want nAI Pres  
nF Refl. nU

ka - ni - Ø - Ø - Ø  
3M Su go M/AI nAI Pres  
nF Su nU

She goes around putting on airs/showing herself off.
Eighteen other examples of complex verb stem initial verbs have been recorded so far. These verbs all denote cognitive-emotional actions and events, and all are structured with an initial verb stem, the "say/do" auxiliary and a body part name in the complex verb stem slot. With these verbs the experiencer is encoded in the auxiliary as subject, and higher animate undergoers, when they occur, as goals, as in (151(a)). For some of these verbs, such as that in (151(b)), no specific object NP appears to be available; the formal transitivity of the auxiliary determines that nevertheless the appropriate direct object form, $\emptyset$ or /ngki/ according to subject number, must appear:

(151) (a) nang tim - ki - pi - impi - tyangi - $\emptyset$ - wa
3M Masc bury 3M Su say,do 2M ear nAI Fut
F hA G nU
He will forget you (sg.)

(b) puty - kirri - mi - ngki - ma$\check{s}$i - $\emptyset$ - ya
possess 1ExcA Su say,do 3Ob belly nAI Past
F AnI Su nU
We (exc., 3 or more) got a shock.

Several hundred distinct monomorphemic complex verb stems, most of them disyllabic, have so far been recorded as occurring in the usual post-auxiliary position. Most of these stems have an exclusively verbal function, rarely appearing outside the verb itself, and I have discovered no nominalising or verbalising affixes. Certain nouns, mostly body parts, and verbal modifiers can appear as complex verb stems; they simply take up the appropriate position in the verb, with no change in form.

(152) (a) ma$\check{s}$i yikin ma$\check{s}$i tuwarr
belly 1ExcM belly full

My belly is full.

(b) ki - 1 - ing - ma$\check{s}$i - $\emptyset$ - $\emptyset$
3M Su PreVb 1ExcM belly nAI Pres
nF Ob nU
It please me./ I'm pleased.

(153) (a) yilyil kingi - m - impi - $\emptyset$ - a marri
straight 1ExcM say,do 2M nAI Past words
Su hA G nU
nF
I told you (sg.) the truth.

(b) ngi - tin - nyi - yilyil - $\emptyset$ - a
1ExcM see 2M Ob straight, nAI Past
Su true nU
F
I recognised you (sg.).
As a general rule, anything which can be construed as an action or event is constructed as a verb, prefixed with an auxiliary, suffixed with number, tense markers etc., and cannot be coded as a nominal entity; (154(a)) and (b) provide typical translations by my informants of English nominalisations into Marrithiyel.

(154) (a) ki - l - ing - mapuk - ø - a ngi -nyarr-ø - wut - ø - a 3M Su PreVb 1ExcM enjoy nAI Past 1ExcM go M/AI walk nAI Pas nF Ob nU Su along Su nU
   Impersonal Constn.

I enjoyed it./ I went walking.
=I enjoyed the walk.

(b) tha - wiyan ngu - mun - ø - pu - ø - ya yuwa
   Cl shit 1ExcM paint 30b small nAI Past that
   Tr Su M/AI Su nF

I smelt something terrible over there.
=There's a terrible smell over there.

The complex verb stem slot has no specific morphology pertinent to this basic description of verbal structure, and the most intriguing questions in their analysis will have to await wider semantic and syntactic investigation. Some of these questions - concerning the assignment of stems to formally transitive or intransitive auxiliaries, the determination of the possibility of higher animate goal affixing - have already been outlined in 5.1.3. and 5.1.4. As also mentioned in 5.1.4., there exists another problem, as to whether each complex verb stem can be given a fundamental semantic explication from which its meaning in combination with each auxiliary, and constraints on co-occurrence with particular auxiliaries, can be predicted.

It should be noted also that within the complex verb stem slot there is extensive compounding of verb stems and extensive incorporation of body part names, both of which phenomena must be considered in a full semantic analysis of the language. Body part incorporation, for example, can operate at a literal level, simply naming the body part as object or instrument:

(155) (a) thawurr ki - l - ing - kit - {perri |
   tree, 3M Su PreVb 1ExcM cut {muri |
   wood nF Ob {thangki |
   {foot |
   {finger |
   {bottom

I've got a splinter in my \{'foot, \{finger, \{bottom\}
We (exc., 3 or more) circumcised him.

I deflowered her.

However, it also extends beyond the literal level, apparently operating to mark the dimensional orientation of the participants of an action. /tiyerr/ "teeth" and /masi/ "belly" are the part names frequently incorporated in the verb and seem particularly important. We have already seen, in 3.1. the opposition they establish as locatives. This opposition appears to continue into their usage in complex verb stems.

(156) (a) ka - ni - ing - paty - tiyerr - ø - a
3M Su go 3M Fem lie down teeth nAI Past
nF hA L-A nU

He fell on her (from a standing, elongated position).

(b) ka - ni -ing - paty - masi - ø - ya
3M Su go 3M Fem lie down belly nAI Past
nF hA L-A nU

He fell on her (from a bunched up position, e.g. from out of a tree).
Chapter 6: OTHER SUBSTANTIVE MORPHOLOGY

6.1. Negatives

Marrithiyel has one principal negative: /ampi/. /ampi/ negates verbs (including imperatives), and appears clause initially, or immediately before the verb:

(1) ampi weti - Ø ku - Ø - ngki - wuki - Ø - ya awu
   NEG 3A nU 3A Su PreVb 3Ob eat nAI Past meat
   nF AnI Su nU

They (3 or more) didn't eat the meat.

/ampi/ also acts as a negative marker for other types of clause level constituents - NPs, deictics, adverbs etc. It occurs immediately to the left of these elements; the negative so formed provides a contrast for an actual argument or modifier of the verb.

(2) (a) wati - Ø - yuwa ampi yikin ki - Ø - Ø - wuki - Ø ya
    sCl 3s that NEG lExcM 3M Su PreVb 3Ob eat nAI Past
    nF M/AI Su nU

That fellow, not me, ate it.

(b) kan - kin wa - rri - Ø - paty - Ø - Ø ampi yuwa
    here EMPH 2M Su go M/AI lie down nAI Imp NEG there
    nU Su

Lie down here, not there.

(I shall not discuss here whether these negative phrases are best analysed as underlingly clausal, with the verb deleted under identity with the verb of the affirmative clause; while this analysis would have at least some semantic merits it is not immediately relevant to this morphological description.)

The negative phrases either appear (left or right) adjoined to the clause or else they immediately follow the constituent with which they contrast. In either case they copy the case inflection of that constituent, e.g.:

(3) muku nany - wa nginti - m - Ø - Ø - Ø ampi yikin - wa
    woman 2M PURP 2M Su say, 3Ob nAI Imp NEG lExcM PURP
    =your F do M/AI Su nU

Do it for your wife, not for me.

/ampi/ can also inflect for tense, copying the /ya/ past or /wa/ future suffixes from the verb. This copying is optional and appears to have no semantic consequences.
(4) (a) ampi - (wa) ku - ti - iti - tyuk - ø - wa
NEG Fut 3M Su PreVb 2/3A burn nAI Fut
F (Impnl) hA Ob nU

They (3 or more) won't get burnt. (Impersonal Construction)

(b) ampi - (ya) ku - ni - ny - ø - ya
NEG Past 3A Su go AnI nAI Past
nF Su nU

They (3 or more) didn't go.

The negatives of the generics /miyi/ "non-flesh food" and /awu/ "meat, flesh food" have special forms:

(5) ampi miyi → ampimi ... no "tucker"
ampi awu → ampira ... no meat

(The insertion of the /r/ in /ampira/ suggests that there was historically a final rhotic on the negative or an initial rhotic on the generic; there is currently no corroborating evidence for either of these suggestions.)

As noted in 3.2.3., the negated generic for "wood, tree", /ampi thawurr/, is used for the general "nothing".

6.2. Deictics/ Demonstratives

There are two main deictic/demonstratives:

(6) kan ......... this, here
yuwa ......... that, there

These items specify verbal actions or nominal entities as taking place or located relatively close to or distant from the speaker. In locating actions they appear on their own as clause level constituents; in locating nominals they appear as NP constituents. In cases of ambiguity, as in (7(b)), /kan/ and /yuwa/ are preferentially interpreted as NP constituents.

(7) (a) titha nany ku - gi - ø - ø - ø
can father 2M 3M Su sit M/AI nAI Pres
=your nF Su nU

Your (sg.) father is sitting {here (relatively close to me), near me.}
{there (relatively distant), away from me.}

(b) meri {kan}
{yuwa}
man {this, here} see 30b nAI Past
{that, there} Su

I saw {this man. (unmarked interpretation)}
{that}
I saw the man {here}. (in context)
Body parts and objects in contact with the body are all categorised as /kan/. Otherwise the conceptualization of actions or entities as relatively close to or distant from the speaker is generally not constrained by physical measures, visibility etc., i.e. it is relative, within parameters established by each particular discourse and its social context. Thus /kan/ in (8(a)) was used for the whole of Marrithiyel country, and was used even though the place specified was more than twenty miles west of the camp site at which the sentence was spoken. On the other hand, /yuwa/ in (8(b)) was used to differentiate an entity within arm's length of the speaker as further away than an entity right next to him.

(8) (a) mana yikin ka - Ø - pul - Ø - Ø kan
brother 1ExcM 3M Su M/AI lie nAI Pres here

=MY nF Su nU

thakirr - nanga ampi tyapana - nanga
Thakirr LOC-ALL NEG Alligator LOC-ALL Point

My brother camps here (i.e. in Marrithiyel country), at Thakirr, not at Alligator Point (MalakMalak country).

(b) watyan kan ka - Ø - pul - ingin - Ø - Ø
dog this 3M Su M/AI lie 1ExcM nAI Pres

nF Su nA L-A nU

ampi kupu - 1 - Ø - titip - Ø wa watyan yuwa
NEG 3M Su PreVb 3Ob bite nAI Fut dog that

F M/AI Su nU

This dog lying next to me won't bite that one.

Note that, like other NP modifiers (adjectives, quantifiers etc.), /yuwa/ and /kan/ cannot stand on their own as NPs. /yuwa/ in (9(a)) therefore has only one interpretation. As discussed in 3.2., however, class prefixing derives nominals from NP modifiers; /yuwa/ in (9(b)) thus specifies the location of the object and not of the action:

(9) (a) nga - nyi - Ø - pipirr - Ø - a yuwa
lExcM PreVb 3Ob skin nAI Past there

Su M/AI Su nU

I skinned it there.
*I skinned that one.

(b) nga - nyi - Ø - pipirr - Ø - a a - yuwa
lExcM PreVb 3Ob skin nAI Past Cl that

Su M/AI Su nU Ia

I skinned that animal (lower animate).
*I skinned it there.
NPs incorporating /yuwa/ or /kan/ show normal behaviour, and can take all the case inflections outlined in 3.1.

When functioning as verbal locational /kan/ and /yuwa/ both take the following suffixes:

(10)  kin   ....  Emphatic
      nganan  ....  Source (Ablative)
      nanga   ....  Locative - Allative
      than    ....  Allative

/kin/, the emphatic, has the same form as the nominal ergative-instrumental inflection, and insofar as the ergative only appears for emphasis, to underline the agenthood of a semantically marked or out of position transitive subject (see 3.1.), it has a similar function. There is perhaps therefore an historic relationship between the ergative and 'emphatic'.

(11)  wuy, wati - Ø - pintipinti   ku - si - Ø - Ø - Ø   {kan} - kin
     no  sCl 3s  old man  3M Su sit  M/AI  nAI  Pres {here} - kin
     male  nF  Su  nU  EMPH

No, the old man's sitting {here}.

/nganan/ suffixes to the deictics with the ablative function described for its suffixation to nominals (see 3.1.):

(12)  (a)  kan - nganan  ka - yirr - Ø - Ø - a
     here  SCE  3M Su  go  M/AI  nAI  Past
     nF  along  Su  nU

He went away from here.

(b)  awu  ku - mun - Ø - it - Ø - a  yuwa - nganan
     meat  3M Su  paint  30b  pick  nAI  Past  there  SCE
     nF  M/AI  up  nU  Su

He picked up the meat from there.

/nanga/ and /than/ can also suffix to the deictics with the same meaning they have with nominals. /nanga/, however, rarely appears with the deictics. Since /nanga/ marks an entity as the location or the reached destination of an action or event (see 3.1.) its function is already covered in the meanings of /kan/ and /yuwa/ themselves; as in its attachment to NPs, when redundant it is normally omitted. The "towards" allative, though, is regularly marked by /than/ suffixation, and it is only deleted when immediate context makes the allative meaning clear.

(13)  weti - pini ku - ni - ny - pini - ya   {kan} - than
     3A  U  3A Su  go  AnI  Su  U  Past
     nF  EMPH

{They (2) came towards here/headed in this direction.}
{They (2) went towards there/headed in that direction.}
(b) nginimpa kini - tin - ø - ø - ø
who 2 Su see 3Ob nAI Pres
nF M/AI nU Su

Who can you (sg.) see?

(c) apan - (a) ki - tin - ø - nity - ø - a mani
where Past 3M Su see 3Ob hide nAI Past money
nF M/AI nU Su

Where did he hide the money?

(d) kuminpa - (wa) nunt - ø - a - wul - ø - wa
when Fut 2M Su M/AI stand return nAI Fut
F Su

wa - ti - ng - ø - wa
2M Su see lExcM nAI Fut
F Ob nU

When will you (sg.) come back to see me?

In addition there is an interrogative deriving suffix /mpa/ "what kind of". This attaches to non-human nouns and to the three non-human class prefixes, /a-/ /mi-/ and /tha(rr) -. The derived interrogative appears clause initially:

(18) (a) awu - mpa ninti - ø - ø - wuki - ø - wa
meat INTERR 2M Su PreVb 3Ob eat nAI Fut
F M/AI Su nU

What kind of meat will you (sg.) eat?

(b) ngatta - mpa ka - rri - ø - purrity - ø - a
hut, INTERR 3M Su PreVb 3Ob make nAI Past
house nF. M/AI Su nU

What kind of hut did he make?

(c) a - muning - mpa kini - mu - ngki - pini - ya
Cl bird, INTERR 2 Su paint 3Ob U Past
feather nF AnI Su

What kind of bird did you (2) paint (i.e. draw a picture of)?

(19) (a) a - mpa ... what kind of meat/lower animate?
(b) mi - mpa ... what kind of non-flesh food/food producing
tree or plant?
(c) tha(rr) - mpa ... what kind of (non food-producing) tree/
wood/honey/tobacco/thing?

/mpa/ interrogatives are answered either by specifying a member or sub-group of the genus in question or by detailing some attribute or property which characterises a sub-group of the class of entities referred to. (20(a)) and (b), for example, are both acceptable answere to (18(b)). (21(a)) and (b) are both acceptable replies to (18(c)).
Note that when /mpa/ follows a consonant other than /rr/, as in (18(c)), the rule of triconsonant reduction applies (see (2.4.4.) and reduces it to /pa/. /nginimpa/ "who" and /kuminpa/ "when" cannot be analysed synchronically as consisting of the morphemes /ngini/ and /kumin/ followed by the /mpa/ suffix; the putative initial morphemes have no meaning in their own right.

The inflectional possibilities of these interrogatives are summarised in the table below.

(22)

<table>
<thead>
<tr>
<th></th>
<th>kin ERG</th>
<th>kin INST</th>
<th>wa PURP/FUT</th>
<th>ya PAST</th>
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<tr>
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*/nanga/ usually deleted following /apan/ because of redundancy. (as with the deictics - see 6.2.)
The failure of /ninytya/, the /mpa/ interrogative and /nginimpa/ to take the ergative suffix does not itself result in ambiguities. Since these interrogatives are all clause initial, when they function as object subject NPs must follow them and will be marked with the /kin/ ergative as being displaced from their normal position (see 3.1.). Since object function can be distinguished so readily by this procedure subject function can remain as the unmarked interpretation of these uninflected interrogatives. Note that this results in interrogative /kin/ affixation as being unambiguously the (transitive) instrumental.

Like the negative /ampi/, /kuminpa/ and /apan/ optionally copy past and future tense affixes from the verb; this is shown in (17(c)) and (d) above. For the other interrogatives, however, /wa/ has the same purposive function as it has with NPs. This purposive function is quite independent of tense, e.g.:

(23) nginimpa - wa wuti ki - ny - Ø - purrrngpurrrng - Ø - a
who Fut water 3MSu PreVb 3Ob boil nAI Past
nF M/AI Su nU

For whom did he boil the water?

/nginimpa/ and the /mpa/ interrogative also optionally copy the past tense affix from the verb. The /ya/ suffix which attaches to /ninytya/, however, is independent of the tense of the verb, and has its own semantic function:

(24) ninytya - ya pa - li - Ø - kurr - Ø - wa meri yuwa
what Past 2M Su PreVb 3Ob hit, nAI Fut man that
F M/AI kill nU

Why (what happened that made you) are you(sg.) going to kill that man?

/kuminpa/ takes the source suffix /nganan/ to produce an interrogative seeking the starting point or temporal extent of a durative action, as in (25(a)). Source inflected /kuminpa/, as shown in (25(b)), is ungrammatical with non durative actions.

(25) (a) kuminpa - nganan kini - n - Ø - putputy - Ø - a angilinan
when SCE 2 Su go M/AI throw a nAI Past hook
nF Su line in nU

\{When did he (set out to) go fishing?
  \{How long was he/has been fishing?\}

(b) kuminpa - (*nganan) kini - nya - Ø - put - Ø - a
when SCE 2 Su PreVb 3Ob get up nAI Past
nF M/AI nU

Su

When did you (sg.) get up?

/nanga/ and /than/ do not show a similar extension of their spatial meaning into the temporal domain, and do not suffix to /kuminpa/.
6.3.3. /pan/ Indefinitiser

A suffix /pan/ derives indefinites from the interrogatives discussed above. /pan/ follows any case inflection or tense affix that may appear on the interrogative. These indefinites are not restricted to clause initial position.

(26) (a) ki - mi - ꞣ - ꞣ - ya ninytya - nganan - pan
     3M Su say, 3Ob nAI Past what SCE INDEF
     nF do M/AI nU
     Su

He did it because of something.

(b) a - mpa - pan wuti - nanga ngi - tin - ꞣ - ꞣ - ꞣ
     Cl INTERR INDEF water LOC-ALL 1ExcM see 3Ob nAI Pres
     1A Su M/AI nU
     nF Su

I can see something (some kind of lower animate) in the water.

(c) tyatyeya - ngi - rri - ꞣ - ꞣ - ꞣ nginimpa - pan
     want, 1ExcM PreVb 3Ob nAI Pres who INDEF
     like Su M/AI nU
     nF Su

     ngi - ni - ny - pini - wa
     1ExcA go AnI U Fut
     Su Su

I want someone / We (exc., 2) will go.
=I want someone to go with me.

(d) ap kan apan - pan ka - ꞣ - pul - ꞣ - ꞣ
     per- here where INDEF 3M Su M/AI lie nAI Pres
     haps nF Su nU

Perhaps its lying around here somewhere.

(e) marri ngi - pi - mpi - ꞣ - wa kuminpa - pan
     words 1ExcM say, 2M nAI Fut when INDEF
     Su do hA G nU
     F

I'll talk to you (sg.) sometime.

6.3.4. /pe/ What - How

When "what" is the object of the simple transitive verb /m(i)/ "say, do" (or a verb which takes the "say, do" auxiliary) it is not coded by /ninytya/, but by a segment /pe/ which appears verb initially. The main verb is normally followed by a simple intransitive indicating the physical orientation of the action:
What are you (3 or more) doing (sitting down)?

The /pe/-prefixed "say, do" auxiliary is also used to enquire how things are done:

(28)  pe - ki - mi - Ø - Ø - ya a - purang
   what 3M Su say, do 3Ob nAI Past Cl wallaby
   nF  M/Al nU 1A
   Su

ki - l - Ø - pu - Ø - ya
3M Su PreVb 3Ob roast nAI Past
nF  M/Al Su nU

What did he do - he roasted the wallaby.
=How did he roast the wallaby?
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Title</th>
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<tbody>
<tr>
<td>Dixon, R.M.W.</td>
<td>1979</td>
<td>&quot;Ergativity&quot; LANGUAGE 55 pp 60-138</td>
</tr>
<tr>
<td>Ladefoged, P.</td>
<td>1975</td>
<td>A Course in Phonetics (N.Y., Harcourt Brace Jovanovich)</td>
</tr>
<tr>
<td></td>
<td>1974</td>
<td>Daly Family Languages, Australia (Pacific Linguistics Series C - No. 32, A.N.U.)</td>
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