THE UNIVERSITY OF CHICAGO

A GRAMMAR OF UNGARINJIN WITH SPECIAL REFERENCE TO THE STRUCTURE OF DISCOURSE

A DISSERTATION SUBMITTED TO

THE FACULTY OF THE DIVISION OF THE SOCIAL SCIENCES
DEPARTMENT OF ANTHROPOLOGY

AND

THE FACULTY OF THE DIVISION OF THE HUMANITIES
DEPARTMENT OF LINGUISTICS

IN CANDIDACY FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

BY

ALAN LEE RUMSEY

CHICAGO, ILLINOIS

SEPTEMBER, 1978

ACKNOWLEDGMENTS

The fieldwork on which this dissertation is based was supported by the National Science Foundation and by the Australian Institute of Aboriginal Studies. The write-up was supported by the University of Chicago. I gratefully acknowledge the help of these three benefactors.

I wish also to thank my teachers at the University of Chicago, especially Michael Silverstein, Paul Friedrich, Eric Hamp, and Marshall Sahlins. Thanks also to Howard Coate, who has generously shared with me the knowledge of Uŋarinjin which he has gained over a period of forty-five years as a medical missionary and devoted amateur linguist.

Finally, I wish to thank my teachers and hosts at the Mowanjum Community. Their generosity, patience, and perseverance with me are the bedrock on which this edifice of description is built.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

LIST OF ABBREVIATIONS AND SYMBOLS

all.	allative
com.	comitative
cont.	continuative
d.b.	dative/benefactive
dat.	dative
dis.	distad
du.	dual
ex.	exclusive
fem.	feminine
fut.	future
gen.	genitive
imp.	imperative
inc.	inclusive
inst.	instrumental
int.	interrogative
irr.	irrealis
iter.	iterative
lat.	lative
loc.	locative
masc.	masculine
N	noun
NP	noun phrase
ob.	object
opt.	optative
pauc.	paucal
pl.	plural
poss.	possessive
pres.	present
prox.	proximad
punc.	punctual
ref.	reflexive/reciprocal
rel.	relative clause
S	sentence
sg.	singular
sub.	subject
trans.	translative
voc.	vocative

/ /	underlying phonological form
[ ]	phonetic form
→	becomes
/___	in the environment
*w_2	a /w_2/ which undergoes second degree strengthening (as per sec. 1.2.2.2)
√‾‾	verb root
#	word boundary

INTRODUCTION

Object of the Investigation

The immediate object of the present account is a group of Australian Aboriginal dialects broadly classified by those who speak them as Ngaṛinjin ([ŋʌ́ṛinjIn]), or Uŋaṛinjin ([ʷuŋʌ́ṛinjIn]).[1] Figure 1 gives a rough idea of the location and extent of the territory with which Uŋaṛinjin is traditionally associated. Figure 2 shows where this area is within Australia.

All of the fieldwork on which this study is based was done at Mowanjum Community, where by far the largest concentration of Uŋaṛinjin speakers is currently to be found. As can be seen from Figure 1, Mowanjum lies some distance away from the traditional Uŋaṛinjin-speaking area. Partly because it lies closer to the southern and western portions of that region, and partly for other historic reasons (discussed in McKenzie 1969), Mowanjum numbers, among its Ngaṛinjin residents, far more people traditionally associated with those portions of the Ngaṛinjin region than with the eastern.

---

[1]There has been some confusion about these terms in the literature, both linguistic and anthropological. There is no difference whatever between the groups of dialects, or people, included by the two terms. Rather, /ŋaṛinjin/ is a bare root form of the appellation, while /uŋaṛinjin/ includes a gender prefix (w)ɯ- (see pp. 73-76), which specifies "w-class neuter," the gender of the word for "language" (wuḷan).

The unprefixed form is used indifferently to mean either 'the Ngaṛinjin language' or 'the Ngaṛinjin people' (not all of whom speak the language any more).

The prefixed form means only "the Ngaṛinjin language."

In this work, I refer to the language uniformly as Uŋaṛinjin, saving the potentially ambiguous Ngaṛinjin to refer unambiguously to 'the Ngaṛinjin people.'

Fig. 1. Ungarinjin Territory

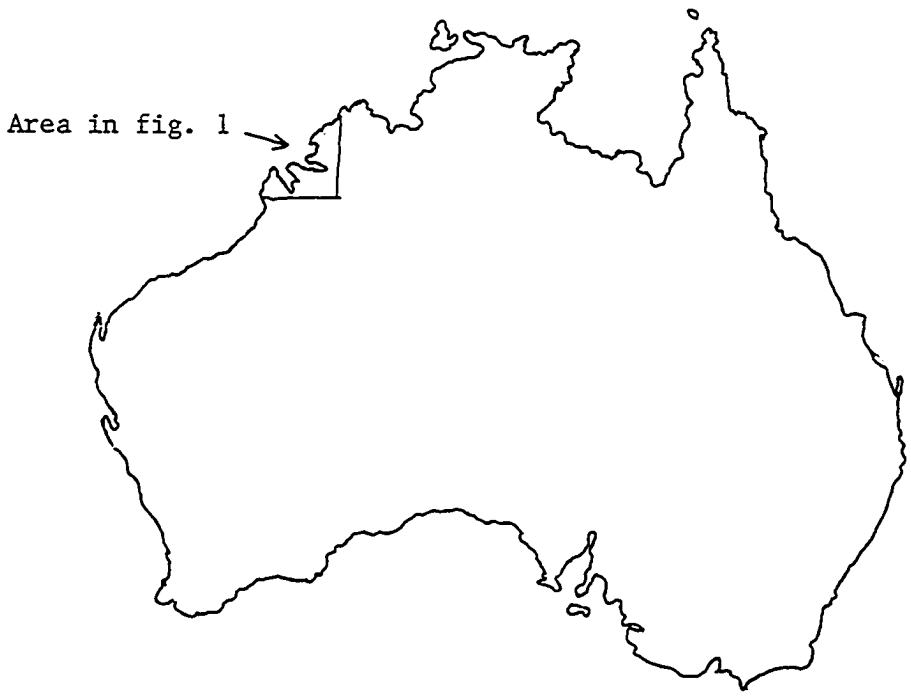


Fig. 2. Area of figure 1 within Australia

For the same reasons, the form of spoken Ungarinjin which predominates at Mowanjum is most nearly that of the southern and eastern regions. I say "most nearly" because it is probably not identical to any pre-contact form of the language, but represents a new pan-dialectal norm which has arisen in recent times within a particular set of historic circumstances (ibid.).

That such a norm exists is indicated by the fact that the speakers of the easterly "Guidj" or "Ola" dialect of Ungarinjin who reside at Mowanjum regularly substitute southern/western lexical items and verb morphology for "equivalent" eastern forms when in the presence of southern and western Ngarinjin people, but not vice versa.

Having said this much, I can specify the object of this account with somewhat more precision. Although I have collected considerable data on the maximally divergent Guidj dialect, and rather less on the north-eastern, Waladja dialect, I shall not attempt to cover these forms of Ungarinjin here, but shall confine myself to the southern/western form which predominates at Mowanjum.

Aims and Scope of the Investigation

My chief aim is to characterize the systematic relationship between the uttered sounds of Mowanjum Ungarinjin and the meanings which are communicated by means of them.

To this end, the exposition is ordered according to that time-honored plan which starts with phonetics and phonology (Chapter 1), moves thence to morphology (Chapter 2), thence to sentence syntax (Chapter 3). The treatment of linguistic semantics does not comprise a separate chapter, but rather is woven into chapters 2 and 3 as the issues arise.

My chief concern in these first three chapters is to describe

the language in as clear, coherent, simple, and comprehensive a way as possible. It is my conviction that that interest is best served by not committing oneself exclusively to the theories, terms, or analytical procedures advanced by any one "school" of linguistics, but rather by drawing on what proves illuminating within any or all of them, and rejecting what does not. (The only constraint here being the requirement that the account be free of internal contradiction.)

Thus, the account in Chapter 1 will be found to include both a post-Bloomfieldian "phonemic" level and a more abstract morphophonemic system of the kind which is more fashionable nowadays. The former is retained from previous work (Coate and Oates 1970, Coate and Elkin 1974) as the most convenient level for a practical orthography. The latter is set up not because it is fashionable, but because it allows for a much simpler and more systematic account of Uŋarinjin morphology.

Likewise, Chapters 2 and 3 draw on the descriptive terminology of traditional grammar, as well as the insights of Praguean markedness theory, Hjemslevian paradigmatic semantics, Chomskian syntactic theory and post-Chomskian generative semantics.

The most unusual feature of this account is the inclusion of an enquiry (Chapter 4) into the form-meaning relationship of Uŋarinjin utterances which, upon grammatical analysis, prove to be larger than one sentence in length. Since, in any language, most utterances fall into this category, in which case most of the sentences of the utterance are uninterpretable apart from other sentences of the same utterance, an enquiry of this kind would seem to be an indispensable part of any attempt to describe a language as fully as possible.

But few linguists have seen it that way. Nor is there enough common ground among existing supra-sentential theories to allow such an enquiry

to proceed in the same spirit of methodological catholicity which informs Chapters 1-3. Rather, the chief concern of Chapter 4 must be to clarify the nature of supra-sentential organization in general, in aid of which I must regrettably sacrifice the goal of comprehensiveness with respect to Ụnarinjin in particular.

Two of the most important aspects of Ụnarinjin supra-sentential organization are, however, treated in enough detail to show the nature of the problem for linguistic analysis which is inherent in all such phenomena, and to serve as test cases for the development of a theoretical framework within which it may be overcome.

The problem, in brief, is that the characteristic relations which are found among linguistic elements at the supra-sentential level are not structural relations of the kind which exist among elements of the same sentence, linking them into construction types; rather, they are indexical relations of the same kind which link an utterance to its non-linguistic environment. Text is but a special case of context.

Thus, the best way to elucidate the structure of multi-sentence text is not to try to extend the techniques developed within linguistics for analyzing single sentences (as many people have tried to do), but to draw instead on a more general theory of the relationship between utterance and environment.

This connection having been made, one discovers that:

1) Some otherwise intractable aspects of the structure of single sentences can also be revealingly accounted for in the same way, and

2) Even the links between purely linguistic elements of a given text sometimes exist only by virtue of certain prior, culturally-constituted indexical relations between each of those elements and its non-linguistic

setting. Thus, there can be no independent science of "text linguistics";[1] only a culture-sensitive "text pragmatics."

---

[1]For some examples of attempts to establish such a science, see the references on p. 237.

CHAPTER 1

PHONETICS AND PHONOLOGY

1.1. Phonetics and Low-Level Segmental Phonology

1.1.1. Phonemic Inventory

The phonemic inventory of Unarinjin is shown in table 1.

TABLE 1

UNARINJIN PHONEMES

Consonants and Semi-Vowels

	Bi-labial	Lamino-pre-palatal	Apico-Alveolar	Apico-pre-palatal	Dorso-velar
Stop	b	dj	d	ḍ	g
Nasal	m	nj	n	ṇ	ŋ
Lateral		lj	l	ḷ	
Rhotic			r	ṛ	
Glide	w	y			

Vowels

	Front	Central	Back
High	i		u
Mid	e		o
Low		a (a:)	

This phonemic level representation is useful primarily as a practical orthography. My orthography differs from that of Coate and Oates in that I write the lamino-pre-palatal glide as y rather than j. This minor change in the system has been made in response to a consensus among those Unarinjin speakers who are literate in their own language, all of whom are also literate in English and most of whom therefore find y less confusing as a representation of this sound than j, which stands for a different sound in English. (For the question of /a:/, see pp. 18-21.)

1.1.2. Phonetic Realization

1.1.2.1 Phonation Types

There exists a style of Unarinjin speech in which laryngealization ("creaky voice") and ingressive whisper are often employed. This style seems to belong almost exclusively to adult women, and was traditionally prescribed for use by widows.

Except within that special, stylistically marked form of the language, all Unarinjin nasals, laterals, glides, vowels, and the rhotic continuant /r/ are always fully voiced, with (pulmonic) egressive airstream. The apico-alveolar trill/flap/r/ is sometimes partially or fully devoiced (for which, see p. 12).

Note that the phonemic inventory includes only one stop series, as is true of many Australian Aboriginal Languages. Along with Coate, I follow the general Australian convention of writing these as "voiced" stops, but this is a somewhat misleading convention, being grounded more in English-based sound perception than in universal phonetics. That is, what English speakers are responding to when they hear these as "voiced" stops is not "voicing" so much as the lack of aspiration. In the production of true voiced stops, there is, by definition, some vocal-cord vibration

during the interval of oral occlusion. This is consistently true of these Unarinjin stops only when they follow nasals within word-internal consonant clusters.[1] In all other positions, these segments are often realized as true voiceless stops of the French variety, where voice onset and offset are simultaneous with oral release and closure respectively. Indeed, in the case of word-final stops, voice offset often comes before oral closure, causing what sounds like an elision of the final stop, or its replacement by a glottal stop. For instance /adag bo/, 'sit down!' can be realized as [ada bɔ^{w}] or [ada? bɔ^{w}] as well as [adag bɔ^{w}].

There seems to be no thoroughly systematic allophony with regard to these voicing characteristics, but there is a general tendency for the true voiceless variants to occur especially frequently in careful speech.

In all speech, the lamino-palatal segment /dj/ is realized as voiceless more often than are the other stops.

1.1.2.2 Articulation

1.1.2.2.1 Stops and Nasals

Note that for each stop, there is a corresponding nasal. This "correspondence" is not merely an abstract phonemic one. The respective places of articulation of all of the pairs of allophones are identical. Therefore a single description of each of those places will suffice for stop and nasal.

1.1.2.2.1.1. Bi-labials. All allophones of these two phonemes involve true bilabial occlusion. Before the back rounded vowel /u/, this

[1]This is true of stops in many languages, both Australian and non-Australian. For another Australian example, see Hercus (1969, p. 16ff.) Non-Australian examples include Modern Greek and several other languages of Southeastern Europe (Hamp, personal communication).

occlusion is accompanied by noticeable rounding. In other environments, the closed lips show a neutral[1] degree of lateral spread.

1.1.2.2.1.2. The Lamino-pre-palatals. For anyone familiar with the sounds of Australian languages, "lamino-pre-palatal" will serve as an appropriate "imitation label"[2] for this pair of sounds. For anyone who lacks such familiarity, no such brief formula can adequately describe their articulation.

The tongue is laterally quite widely spread, with the tip touching the back of the lower teeth. The blade contacts the alveolar ridge and a relatively small portion of the adjacent palatal region. Sometimes the blade also contacts the back of the upper teeth.

While the oral articulation for /nj/ and /dj/ is identical, one aspect of the latter calls for special comment. Immediately following the release of /dj/, there is a brief interval of audible turbulence. In other words, the stop is a slightly affricated one. For the corresponding nasal there is, of course, no appreciable buildup of air pressure during oral occlusion, and hence no audible turbulence upon oral release.

1.1.2.2.1.3. The Apico-alveolars. The active articulator for these consonants is just the tip of the tongue, which contacts the alveolar ridge in a position which is practically identical to that which is specified by Daniel Jones for "cardinal alveolar t" (Jones 1969, p. 46).

1.1.2.2.1.4. The Apico-pre-palatals. Ladefoged has observed that "in some South Asian languages the retroflex consonants involve only the tip of the tongue and the back of the alveolar ridge, whereas in others

---

[1] As per figure b, Jones 1966, p. 17.

[2] Pike 1943, p. 16ff.

there is contact between a large part of the underside of the tongue tip and much of the forward part of the hard palate" (Ladefoged 1971, pp. 39-40). There is a similar range of variation among the many Australian languages having "retroflex" consonants. Sometimes the underside of the tongue is actively involved. This is true, for instance, of Wemba Wemba (Hercus 1969, p. 18) and Pitjantjatjara (Douglas 1964, p. 15). In Unarinjin, on the other hand, it is just the apex which makes contact. The point of contact is in the pre-palatal region, such that the apex is pointing "straight up" rather than "bent back."[1]

1.1.2.2.1.5. The Dorso-velars. All allophones of these consonants are within the velar or uvular range. Before the front vowels /i/ and /e/, contact is relatively far forward: almost, but not quite, in the palatal region. In the environment of stressed /a/, contact is post-velar or uvular. Elsewhere it is velar.

1.1.2.2.2. Laterals

All lateral segments in Unarinjin are voiced bilateral approximants without audible friction.

For the two apical laterals, l̤ and l, the tip of the tongue is in the same position as for the corresponding apical stops and nasals (see above, pp. 10-11). The positioning of the rest of the tongue for these segments (and hence their relative "clearness" vs. "darkness") depends mainly on the quality of the preceding and/or following vowel. Both are relatively "clear" in the environment of front vowels, and relatively "dark" (though never as dark as the Russian l, or the Scotch English one) in the environment of back vowels.

[1] These are precisely the terms in which the articulation of these consonants has been described by Unarinjin speakers, several of whom show a remarkably high degree of articulatory phonetic awareness.

For the "lamino-pre-palatal" segment /lj/, the tip and blade of the tongue are in the same position as for the corresponding stop and nasal (see above, p. 10). Unlike the apical laterals, this segment does not vary greatly in resonance under the influence of adjacent vowels. Rather, the middle part of the tongue is always held close to the palate, so as to give this segment its own characteristic "clear" resonance.

1.1.2.2.3. Rhotics

"Apico-alveolar" /r/ has several allophones, all of which involve contact between the tip of the tongue and the alveolar ridge, or a position further back in the "post alveolar" region. Word-medially, it is always a fully voiced trill [r] or flap [ɾ]. Word-finally, it is a voiced flap or a partially-to-fully devoiced trill. Usually, voicing extends through at least the first tap of the trill. then trails off. Sometimes, during the devoiced portions of these word-final trills, there is a weakening of articulation such that the tongue fails to make contact and the trill dissolves into a fricative[ɹ̥]. Thus, the word /ŋur/, 'to hit', may be pronounced in any of the following ways: [ŋuɾ], [ŋur], [ŋurr̥], [ŋurr̥], [ŋuɾɹ̥], [ŋurɹ̥], [ŋurr̥ɹ̥], [ŋurr̥ɹ̥].

"Apico-pre-palatal" /ṛ/ though placed with ḍ, ṇ, and ḷ (and with r) on grounds of pattern congruity, differs from all of them in an essential way. It is produced without any contact between the tongue and the roof of the mouth. Rather, the apex is pointed straight up in the direction of the pre-palatal area, as if its target were the same as that of the other apico-pre-palatals, but is never brought close enough even to cause audible friction. The sound is phonetically a vocoid:[ɚ]. Just as with l and ḷ, the position of the mid and back part of the tongue for /ṛ/ depends on the adjacent vowels, so that its allophones include

"r̥-colored" versions of all the vowels discussed below.

1.1.2.2.4. Glides

/w/ is always a voiced bi-labial frictionless continuant. Before /o/ and /u/, its articulation includes noticeable lip-rounding. Before other vowels, the lips are normally not visibly rounded. But under heavy emphasis, /w/ in all environments may be articulated with obvious lip rounding and protrusion. Under all conditions, there is often a noticeable degree of velarization.

Phonetically, the "lamino-pre-palatal" glide /y/ bears the same relation to dj, nj, and lj as r̥ bears to d̥, n̥, and l̥. That is, it is a voiced vocoid whose articulatory target is the same as that of dj, nj, and lj. The tongue is laterally quite widely spread, with the tip pointing toward (or even contacting) the lower teeth. For the articulation of y, the blade and mid-tongue are brought quite close to the palate: closer than for canonical Unarinjin /i/ (which is [I]), but not close enough to cause any audible friction. The nature of the movement to and from this position depends on which sounds come before and after it.

1.1.2.3. The Vowels

1.1.2.3.1 The High Vowels

The "unmarked" or "elsewhere" realization of the high vowels /i/ and /u/ is [I] and [U] respectively. That is, they are not the maximally high, tense, front vowels of French "pipe" and "poudre," but somewhat lower, laxer, and centered, approximately as in English "pip" and "book."

1.1.2.3.1.1. /i/. /i/ is realized as [i] in three environments:

1) when followed by /y/, e.g.,

/biya/ 'ought' → [biyʌ]

/budniyaŋari/ 'beautiful people' → [bədníyʌŋʌ̀ri]

2) when followed by /dj/ or /nj/ in doubly closed syllables (those of shape C_1VC_2), except when C_1 is /b/ or /w/, in which case /i/ retains the [I] pronunciation, e.g.,

/ṛidj/, 'to pull' → [ṛidj]

/gidja/ 'the Gidja tribe' → [gídjʌ]

/linj/ 'to look' → [linj]

/mindinja/ 'over there' → [mIndínjʌ]

But: /widjin/ 'open sore' → [wídjIn]

/bidjin/ 'to connect' → [bídjin]

/winjaḍun/ 'the Synott Range' → [wínjʌḍun]

3) when occurring word-finally or before a "loose juncture" (see below, sec. 2.1.5.4.1), e.g.,

[djiri] 'him' → [djíri]

[gaṇḍi] 'uncle (MB, et al.)' → [gʌ́ṇḍi]

[di-gu] 'for that, therefore' → [dígù]

Since [i] does not contrast with [iy] in word-final position, one could account for conditioning of type 3 above by positing underlying /..iy#/ for all instances of final /i/. The maximally high quality of these vowels would then be taken care of by the type 1 rule. I have no arguments against such a proposal, but since I prefer to make the phonology no more abstract than necessary, I shall continue to represent final [i] as /...i/ and retain the type 3 explanation given above.

There are, however, some instances of i , which I will account for by positing underlying /iy/. These occur in environments where, according to the rules given above, one would expect [I]. There is, for instance, a suffix meaning 'in the direction of' which is pronounced -[binj]. Rather than positing a separate /i/ phoneme (distinct from /I/)

just to account for the relatively few exceptions of this kind, I will represent these instances of [i] as /iy/. This suffix, then, will be spelled -biynj.

A phonological solution of this kind also seems to be the best way of accounting for the limited instances of phonetic long vowels in Unarinjin. Note that my phonemic inventory for the language did not include vowel length as distinctive, except, possibly, for /a/. Unarinjin differs strongly in this respect from Worora, a fairly closely related language, most of whose speakers also speak Unarinjin (often with "foreign sounding" long vowels in words having long vowel Worora cognates!). In Worora, long vowels occur with approximately the same frequency as short ones and must be regarded as distinct phonemic units. In Unarinjin, on the other hand, phonetic long vowels are very infrequent. This alone makes it unlikely that they are single phonemes.

But there is more solid evidence which points to the same conclusion. For every Unarinjin word showing a phonetic [i:] , when the word is pronounced slowly and carefully by native speakers, the [i:] has a "circumflex" pitch contour. That is, over the duration of the vowel, there is a slight rise in pitch, followed by a slight fall. Furthermore, where this long i is not followed by /y/, /dj/, or /nj/, there is, for many speakers, a change in vowel quality such that what one hears is a diphthong /i͡ɪ/. Therefore, even at the phonetic level, there are good reasons to regard these long i segments as /iyi/. This accounts for the maximally high quality of the first part of this segment (type 1 conditioning) and for its phonetic length.

Phonologically, this solution accounts both for the relative infrequency of [i:] , and for the fact that it never contrasts with /iyi/. The latter, that is, is a sequence which does not otherwise occur.

1.1.2.3.1.2. /u/. As noted above, the usual realization of this vowel is U . It is realized as [u] in two environments:

1) when followed by /b/ or /m/, e.g.,

dubula 'red' → [dúbʊlʌ] gumun-gumun 'quiet' → [gum^{ʊ}n gum^{ʊ}n]

2) when occurring word-finally or before a loose juncture, e.g.,

bu 'to blow' → [bu]

bubu + ŋari 'cigarette' → [búbuŋʌ̀ri]

(see sec. 2.6.4.8)

It will be noted that these two rules may readily be combined with the first two rules for /i/ given on pp. 13-14. The more general form of rule 1 says that a high vowel, when followed by a "corresponding" stop or nasal, is maximally high, maximally peripheral, and maximally tense. In order to capture the "correspondence" which is involved here, one must assign some common feature specification to 1) labials and /u/, and 2) palatals and /i/ (cf. pp. 38-39 below).

When /u/ is followed by /w/, its phonetic realization depends on which vowel follows the /w/.

When /u/ occurs before /wa/, it is lowered, by varying degrees. In careful "elicitation speech," it is still identifiable as /u/, but in normal conversational style, it is lowered to [ɔ], where it is phonetically indistinguishable from one of the allophones of /o/ (which causes no confusion because /o/ in this environment is realized as [o], for which, see pp. 21-22).

For example:

/duwa/ 'ankle' → [dɔwʌ]

/-luwa-/ 'to fear' → -[lɔwʌ]-

When /u/ occurs before /wu/, the phonetic realization of this /uwu/

sequence is analogous to that of /iyi/, discussed above (p. 15). That is, it emerges as a long vowel [u:], or mild diphthong [u̯u̯]. Solid evidence for the "psychological reality" of /uwu/ as the underlying representation for [u:] in Uŋaṛinjin was provided by one of my informants, David Mowaḷdji-yali, who, before I suspected that there were no underlying long vowels in Uŋaṛinjin, presented me with a manuscript in which he had written the word [bú:ru], 'north' as buwuru. Other examples are:

/duwu/ 'to float' → [du:]

/djuwunbi/ 'fibula' → /djú:nbi/

1.1.2.3.2. /a/.

The /a/ phoneme is by far the most frequently occurring vowel in the language and shows a wider range of allophonic variation than any other vowel.

It is maximally open when it occurs in monosyllablic words, and is somewhat longer in duration in this environment than elsewhere, e.g.,

/a/, 'he goes' → [a·]

/ba/, 'to arrive' → [ba·]

/wa/ 'not' → [wa·]

/ḍar/ 'to stand' → [ḍa·r]

/gaṇ/ 'to sing' → [ga·ṇ]

/mag/ 'message stick' → [ma·g]

When carrying primary stress[1] in polysyllabic words, /a/ is higher and shorter than the above [a·], by a degree which depends on which consonant follows it.

The most centered allophone, [ʌ], occurs before r (but see sec. 1.1.2.3.3 below).

---

[1]For an account of Uŋaṛinjin stress, see Coate and Oates 1970, pp.7-8.

For example:

/bara bara/ 'story' → [bʌ́rəbʌ̀rə]

/yaridj/ 'to go down' → [yʌ́ridj]

/mariŋi/ 'my (potential) wife' → [mʌ́rIŋi]

Before w, /a/ is realized as a low, somewhat fronted vowel, about halfway between [a] and [æ] in quality, which I transcribe as [a$^{>}$].

For example,

/mawiŋgi/ 'cold season' → [má$^{>}$wIŋgi]

/gawad/ 'childishness' → [ka$^{>}$wʌ̀d]

/awa/ 'open' → /á$^{>}$wʌ/

The "elsewhere" realization of /a/ under primary stress is as a low vowel somewhere between [ɑ] and [ʌ]. Under secondary stress in all environments, /a/ is regularly realized as [ʌ]. Tertiary -stressed (i.e., unstressed) /a/ is reduced to [ə].

1.1.2.3.3. Long /a/

Comparative evidence from Worora suggests that the proto-language from which Uŋaṛinjin is descended showed phonemic distinctions between long and short a, i, and u. Compare, for example, the Worora and Uŋaṛinjin forms in table 2.

TABLE 2

LONG AND SHORT VOWELS IN WORORA AND UŊAṚINJIN

Worora	Uŋaṛinjin
a:wa 'opened up'	awa 'open
awa 'he'	
i:dja 'man'	idja 'my father, FB, FFBS, FFFBSS, et al.'
ŋuru: 'turn around'	ŋuru 'turn one's back'
ŋuru 'right here'	

As I have discussed, Unarinjin does exhibit a few instances of phonetic [i:] and [u:], which can be explained as arising from /iyi/ and /uwu/ respectively. As table 2 illustrates, one does not find [i:] and [u:] as reflexes of Proto-Kimberley */i:/ and */u:/, but rather their "short" counterparts, for which length is not distinctive. Likewise, there are a few instances of phonetic [a:] in Unarinjin all of which probably arise from sources other than underlying (or historic) /a:/.

Of these, the easiest to account for are those which come from a+a in external sandhi.

For example:

/bá ángalu/ → [bá:ŋgʌlu]

'arrive' 'he came' 'he came'

'he arrived'

njá áwan → [njá:wʌn]

'born' 'he falls' 'he is born'

This contraction of a+a to a: takes place mainly in the specific morphological environment exemplified above, that is, at the juncture between verbal particle and conjugated auxiliary (see pp. 102ff). But this morphological specificity may be an accidental result of the fact that a: arises in external sandhi only from two stressed vowels, a requirement which is seldom met elsewhere. In any case, the rule is an optional one, and seldom applies in the most careful speech.

There is another position within the conjugated auxiliary verb where [a:] occurs (albeit sporadically) in the speech of most Unarinjin speakers. I shall argue below (sec. 2.2.4) that this [a:] arises from $a+w_2a_2$, where w_2 is a morphophoneme which is distinct from w_1 in that it alternates with /g/ rather than /b/.

Then there is a tiny but troublesome residue of unanalyzable mono-morphemic words which show internal [a:] vowels, e.g.,

[yá:rʌ] '(male) hill kangaroo'

[má:ŋgʌrʌ] 'clan territory of mother's brother'

In order to account for such forms, it may be necessary to posit a separate /a:/ phoneme for Ungarinjin. This phoneme, if it exists, may be a recent importation due to lexical borrowing, or, on the other hand, may be the last vestige of an earlier system in which vowel length was distinctive for /i/, /u/, and /a/. Either way, the presence of this distinction just for /a/ in present-day Ungarinjin would accord with general principles of markedness, /a/ being the least marked member of the vowel system, and, hence, most likely to be uniquely sub-differentiated along another dimension such as length.

Another, more elegant explanation is indicated by the verb-internal morphophonemic facts cited above. That is, one could posit underlying /aw$_2$a/ for all instances of otherwise unexplained [a:]. As we have seen (sec. 1.1.2.3.1), [i:] and [u:] arise from iyi and uwu (morphophonemic uw$_1$u) respectively. In the operation of this, and other (see sec. 1.1.2.3.1.2) phonological rules, i and y (plus also dj and nj) form a "natural class" as do u and w$_1$ (along with b and m). In the operation of the word-internal /a+w$_2$a/→[a:] rule, w$_2$ and a form another natural class (which also includes g and ŋ). It is thus possible to account for all distinctive word-internal Ungarinjin "long vowels" by a single phonological rule which operates on the sequence $\begin{Bmatrix}i\\u\\a\end{Bmatrix}$ + corresponding glide + $\begin{Bmatrix}i\\u\\a\end{Bmatrix}$. This solution both simplifies the environment of this rule and regularizes the Ungarinjin vocalic inventory by obviating the need for a length opposition

at just one position. But despite its elegance, I am somewhat suspicious of this solution because there is no evidence for positing underlying /aw$_2$a/ outside the realm of verbal morphology, a realm in which there exist several phonological sequence restrictions which do not apply elsewhere. In any case, w_2 (unlike y) is strictly an abstract morphophonemic unit, which never surfaces as phonetically distinct from w_1, so in my phonemic orthography, I will follow Coate and Elkin by writing [ɑ:] as a: in those rare instances where it occurs, noting the morpho-phonemic where applicable in verbs.

1.1.2.3.4. /e/

The "elsewhere" realization of /e/ is as a short front vowel which approximates the [ɛ] of English <u>set</u>.

When followed by y, dj, or nj /e/ is realized as a somewhat higher vowel, almost, but not quite, as high as the mid front cardinal vowel [e], e.g.,

/nedj/ 'urinate' → [ne^{v}dj]

/menja/ 'should not' → [mé^{v}njʌ]

/yeyad/ 'lungs breath' → [yé^{v}yʌd]

/e/ has this same nearly-cardinal [e] quality when it occurs as the final segment in a monosyllabic word, but is somewhat longer in duration in this environment than elsewhere, e.g.,

/ŋe/ 'I am' → [ŋe^{v}•]

/me/ 'vegetable food' [me^{v}•]

1.1.2.3.5 /o/

In nearly all environments, /o/ is realized as a mid-to-low back rounded vowel somewhere between cardinal [o] and [ɔ]. It is raised and

rounded to a position closely approximating (but not quite as high as) [o] when followed by w, e.g.,

djowad 'to jump' → [djó^{V}wʌd]

ṛowaŋari 'white' [ṛó^{V}wʌŋʲʌ̀ri]

1.1.2.4. Some Additional Phonetic Diphthongs

As seen above, the sequence V + glide + V is often realized as a phonetic long vowel or diphthong. Now that I have described all five underlying vowels, there are some further diphthongs which can be accounted for in this way.

First, there is a falling front diphthong i͡æ which sounds like the "a" of man in Chicago English. It occurs, for instance, in the word 'shame' which is pronounced [dji͡æ·n]. In their Ngarinjin-English Dictionary, Coate and Elkin spell this word djijan (read djiyan). But there are many Uŋaṛinjin words containing the sequence iya in which this sequence is not realized as a diphthong, but as bisyllabic [..iyʌ..] (for examples see p. 222), and no words showing an i͡æ sound for which we have independent evidence for underlying /iya/. Rather, both the phonetic and the distributional evidence point to underlying /iye/. Phonetically, the initial and terminal loci of this diphthong are within the range of /i/ and /e/ respectively (the initially maximally high quality being conditioned by the presence of following /y/, as per p. 13), while the terminal locus is not within the range of the underlying /a/ assumed by Coate and Elkin. Distributionally, one may note that, while there are plenty of occurrences of bisyllabic [..iyʌ...], there are no examples of non-dipthongized [..iyɛ...]. Therefore, we may safely assume a low-level phonological rule /iye/ → [i͡æ].

There is another phonetic diphthong which is pronounced [ɛ͡ʊ]

or [ɛ̃ũ], depending on what follows. Since its initial and terminal loci are within the range of /e/ and /u/ respectively, and since there are, as far as I know, no independent instances of bisyllabic -ewu-, I will assume underlying /ewu/ for these diphthongs.

Examples are:

dewu → [dɛ̃ũ]

(onomatopoeic word representing the sound made by the umbrella lizard |Chlamydosaurus kingii|)

ṇewu ṇewun → [ṇɛ́̃ũṇɛ̀̃ũn]

'masked owl'

1.1.3. Phonemic Distributional Restrictions

Any of the five vowels may occur word-initially, medially, or finally. In initial position, i- and u- merge phonologically with yi- and wu- respectively. Sometimes the initial glides are phonetically present; sometimes not. The difference is never distinctive.

All of the consonants may occur word-initially except r and lj.

Any consonant may occur word-finally except lj, b, m, or ṛ. When occurring finally, dj and g tend to be elided.

Initial consonant clusters are textually rather infrequent, and are limited to the following:

br̤, dr̤, mr̤, gr̤, br̤, brr̤

Word medial, intervocalic clusters of two consonants are quite common. Table 3 shows which combinations occur. Some combinations which do not occur within the word as such are found where a consonant-initial suffix or postposition follows a consonant-final stem. These are instances of what I have called "loose juncture" (see sec. 2.1.5.4.1). Where some particular sequence occurs only at a loose juncture, this fact is indicated

TABLE 3

WORD-INTERNAL INTERVOCALIC BICONSONANTAL CLUSTERS

First Member \ Second Member	b	dj	d	ḍ	g		m	nj	n	ṇ	n	lj	l	l̤		r	r̤		w	y
b																	X			
dj																				
d	X		L		X		X		X		X		X							
ḍ	X	X		L	X		X				X						X			
g			L														X			
m	X		X																	
nj		X																		
n	X	L	X		X		X				X									
ṇ	X	L		X	X		X				X									
ŋ	L				X															
lj		X																		
l	X	L			X		X				X								X	
l̤	X	X		L	X		X				X								X	
r	L	L	L		X		X				X						X		X	
r̤																				
w		L									L									
y	X	L																		

by an L in the cell for that combination on the chart. Combinations which occur within the word as such are indicated by an X.

It is possible that there exist some Ngarinjin words showing internal clusters not noted on Table 3. But the number of such cases must be small, for this tabulation is based on a thorough search through my entire corpus of some 1,000 pages, and a critical review of the Coate and Elkin Ngarinjin-English Dictionary, which contains about 7,500 words. Most of the clusters noted on the chart are attested by over twenty examples in these combined texts.

Looking at the chart, one can draw several generalizations which shed light on the operation of certain morphophonemic rules to be discussed below (sec. 1.2).

First, note that where a nasal consonant occurs as the first member of one of these clusters, the second member can only be a nasal or a stop.

A second important generalization involves just the lamino-pre-palatals dj, nj, lj, y, the apico-alveolars d, n, l, r, and the apico-pre-palatals ḍ, ṇ, ḷ, ṛ. Because of the way they fit into the five-place articulatory scale of Ngarinjin consonants, let us label these lamino-pre-palatal, apico-alveolar, and apico-pre-palatal positions 2, 3, and 4 respectively. The generalization we can make is that when both consonants of a word-internal cluster are drawn from the set {2, 3, 4}, the members of the pair may not differ by one. There are, for instance 4-2 pairs such as ḍdj and ḷdj, and 4-4 pairs such as ṇḍ and ṛḍ, but no 4-3 pairs or 3-2 pairs. Of course, not all combinations which do not violate this constraint do in fact occur. The point is rather that there occur none which do violate it.

Note finally that ḍ does not occur as the second member of any

cluster in which the first member is not also an apico-pre-palatal.

Word-internal tri-consonant sequences are limited to the following:

lŋg lnb lng lmb

l̤ŋg l̤nb l̤ng l̤mb

Note that these sequences, which fit into a pleasingly regular pattern, follow the same {2, 3, 4} constraint which was found to hold among the two-consonant clusters discussed above.

1.2. Morphophonemics

Morphophonemics assumes a morphology, but the morphology cannot be represented without morphophonemes. Thus, there is no entirely satisfactory way of ordering one of these two grammatical domains with respect to the other in a presentation such as this. Here I shall follow the traditional but arbitrary practice of presenting the morphophonemics first, then the morphology, but will try to minimize the problem of mutual implication through the use of extensive cross-referencing between the two sections.

1.2.1. Morphophonemic Inventory

The units which enter into morphophonemic alternations in Unarinjin are shown in table 4.[1]

TABLE 4

UNARINJIN MORPHOPHONEMES

mb				ŋg
b	dj	d	ḍ	g
w_1	y_1	y_2	ṛ	w_2
u	i			a_1
	o	e		
		a_2		

[1]For reasons which will become clear in secs. 1.2.2.1 and 1.2.4, Hamp (personal communication) has suggested that the two units listed on

1.2.2. The Sonorance Hierarchy

The first three rows of table 4 form what may be called a "sonorance hierarchy." By a process which I will call "consonant strengthening," each of the continuants in row 3 is, in certain environments, replaced by the corresponding stop given above it in row 2 ("first degree strengthening") or by the nasal + homorganic stop combination given above it in row 1 ("second degree strengthening").

1.2.2.1. First Degree Strengthening

Among the environments which condition these strengthenings, by far the easier ones to specify are those which give rise to strengthening of the first degree. In general, these environments are predictable from the consonant cluster restrictions given above (sec. 1.1.3). One of the generalizations reached there was that where a nasal is the first member of a cluster, the second member can only be a nasal or a stop. Accordingly, whenever one of the morphophonemic continuants in row three occurs after a nasal, it is replaced by its corresponding stop. Because no Ungarinjin words or morphemes end in m, and none except a few "verbal particles" (see p. 102) ends in ŋ, this process is attested mainly for nj-, and n-, and ṇ- among the nasals.

The following forms exemplify this process for each of the continuants in row 3:

njin	$-\sqrt{w_1 a}$ - n	→	[njInbΛn]
2sg.	-'fall'-pres.		'you fall'

(for $\sqrt{wa}$. see sec. 2.2.1.)

---

table 4 as w_2 and a_2 be identified as /γ/ and /Λ/ respectively. Although I find this suggestion in some ways an attractive one, I have resisted adopting it here, mainly out of a constitutional dislike on my part for investing morphophonemes with phonetic values which do not directly correspond to any of their surface manifestations. I prefer to keep them patently abstract by using numerical subscripts.

garen - $w_1$alu → [gárɛnbʌ̀lu]

(place called) Garen - 'from' 'from Garen'

(for -$w_1$alu, see sec. 2.6.4.6)

linj - wa → [límbʌ],

'to look at'-iter. 'to peer at'

(for -wa see sec. 2.2.14) (for nj→m, see sec. 1.2.3.2)

gaṇ - wa → [gáṇba]

'to sing'-iter. 'to sing'

(see p. 158-9)

y_2

njin - $\sqrt{y_2 i}$ → [njɪ́ndi]

2 sg. 'be' 'you are'

(for $\sqrt{y_1 i}$, see sec. 2.2.1)

wuṇlan - $y_2$ali, → [wʊ́ṇlʌndʌ̀li]

'word' 'indeed' 'word indeed'

(for $y_1$ali, see sec. 2.6.4.1)

warmaṇla - biynj - $y_2$ali → [wármʌṇlʌbiyndʌ̀li]

'desert' all. 'indeed' 'desert-wards indeed'

(for biynj, see sec. 2.1.5.4.3.3.) (for nj→n, see sec. 1.2.3.2)

y_1

naŋ - ∅ - $\sqrt{y_1 ila}$ - n → [ŋʌ́njdjɪl ʌ̀n]

1 sg. 3sg. 'hold' pres. 'he holds me'

(for $\sqrt{y_1 ila}$, see sec. 2.2.1.) (for n→nj, see sec. 1.2.3.2)

yudug njin - $\sqrt{y_1 inde}$ - n → [njInjdjIndɛ̀n]

'bow down' 2sg. 'fall' pres. 'you bow down'

(for $\sqrt{y_1 inde}$ see sec. 2.2.1.)

ganda - biynj - $y_1 u$ → [gʌ́ndábiynjdjù]

'there' all. lat. 'over to there'

(for - $y_1 u$, see sec. 2.1.5.4.3.4)

umbun - $y_1 u$ → [úmbʊndjù]

'what-cha-ma-call-it' lat. 'to what-cha-ma-call-it'

(for umbun, see p. 50)

ŋan - ∅ - $\sqrt{ṛa}$ - n → [ŋʌ́ndan]

1sg. 3sg. 'come' pres. 'he comes to me'

(for $\sqrt{(r)a}$, see sec. 2.2.1) (for d→d, see sec. 1.2.3.3)

Wyndam[1] - ṛa → [wÍndəmdʌ̀]

Wyndam loc. (see sec..2.1.5.4.3.1) 'at Wyndam'

"billabong"[2] - ṛa → [bÍləbɔŋdʌ̀]

loc.

umbun - ṛa → [úmbʊndʌ̀]

'what-cha-ma-call-it' loc.

---

[1] m does not occur as the final segment of any native Uŋarinjin words. This word, which is the name of a town in the eastern Kimberley is a "foreign," English word. But consonant-strengthening applies as expected even following m, as in this rare example.

[2] This noun, which has an "impermissable" final -ŋ, is a borrowing by way of English. Here again, strengthening operates in the expected manner.

w_2

ŋan - ∅ - w_2a_2 - $\sqrt{w_1u}$ → [ŋʌ́ngɔ]

1sg. 3sg. irr. (see sec. 2.2.4) 'hit'

$w_2$angun 'some time'

first-syllable-reduplicated form:

waŋ-w_2aŋ-gun → [waŋgáŋgᵘn]

'any time'

Although first-degree strengthening is not attested for every continuant after every nasal, every morphophonemic continuant (i.e., each of the units in row three of the chart) which does occur after a nasal is strengthened. The fact that examples do not exist for every possible combination is, I submit, an accident of the morphology rather than a fact about the morphophonemics.

Outside of the "post-nasal" position, the environments for first-degree strengthening are somewhat less regular, and differ depending on which continuant is at issue. The general tendency is for all continuants to strengthen following any consonant (including, of course, the nasals, after which strengthening applies without exception). This follows a general proscription against sequences of consonant-continuant, which is evident from an inspection of table 3 (p. 24).

But where the first consonant of the pair is not a nasal, this proscription does not apply "across the board."

First, note that w may occur after l, l̤, or r. Accordingly, morphophonemic w_1 does not undergo strengthening in these positions, e.g.,

/madjal - $w_1$alu/ → [mâ^dja>lwʌ̀lu]

'grass' 'from' 'from the grass'

(see sec. 2.6.4.6)

/dol - w_1a/ → [dɔ́lwʌ̀]

'burst' iter.

(see sec. 2.2.14)

/ŋular - $w_1$alu/ → [nŭ́lʌrwʌ̀lu]

'north' 'from' 'from the north'

/ŋar - $\sqrt{w_1a}$ - n/ → [ŋárwʌn]

'we'(incl.) 'fall' pres. 'we fall'

(for $\sqrt{w_1a}$, see sec. 2.2.1)

After all other consonants, w_1 is strengthened to b. Note that djb and gb are forbidden clusters. When these sequences are present underlyingly, they are realized as yb and b respectively. The phonological rule which effects the latter, i.e., g → ∅/__b (or perhaps g → w/__b, as per sec. 1.2.3.1) must be ordered after first degree strengthening to account for the fact that morphophonemic . . .VG-w_1v . . . is realized as VbV.

The following forms exemplify first degree strengthening of w_1 in environments other than l-, l̤-, and r-, and the rules g → ∅/__b and dj → y/__b:

did - w_1a → [dɪ́dbʌ̀]

'to cut' iter. (see sec. 2.2.14)

rulug - w_1a → [rʊ́lʊbʌ̀]

'to shift' iter.

burgaydj - w_1a → [bʊ́rgʌybʌ̀]

'to question' iter.

wowalad - w_1a → [wówəlʌdbʌ̀]

'to clear a piece of land' iter.

All of the other morphophonemic continuants undergo first degree strengthening following any consonant. This generalization is not supported by examples for every possible consonant-continuant pair, again, I submit, because of accidents of morphology. It must be borne in mind that the number of morphemes involved is quite limited. Furthermore, for several strengthening combinations, the only available examples are found at the juncture between word and postposition. Since Ungarinjin words may not end in r, lj, b, or m, (see sec. 1.1.3) strengthening for most continuants is not attested following these consonants. (But see the m- example on p. 29). But since there is no counter-evidence, there is no harm in stating the rule as generally as possible, viz.: All morphophonemic continuants (i.e., the units in row three of table 4 on p. 26 above) except w_1 strengthen following any consonant.

For y_1, y_2, and w_2 (as for w_1 above), these strengthenings follow consonant cluster restrictions which are evident from table 4. Curiously, this is not true of r. Alternating morphophonemic r occurs on only two morphemes. One of them is one of two allomorphs of the transitive verb root √a ∿ √ra, 'go to, come to'. The only consonant it ever follows is n, in which case it strengthens to d (→d), as illustrated by the example on page 29 above. The only other morpheme showing alternating r is the locative postposition -ra. Note that within the word, r is permitted in several post consonantal positions, including r-, d- and g-. Nonetheless, the r of this locative postposition strengthens following any consonant, including these three. Strengthening of this r after nasals has already been illustrated on p. 29. Strengthening after other consonants is illustrated by the following examples:

ma•g	-	ra	→	[ma.gdʌ]
'message stick'				'on the message stick'

wandiwud - ra → [wá^ndIwʊddʌ̀]

'kangaroo'

baɡid - ra → [bá^gIddʌ̀]

'pocket'

(borrowing from English)

ŋurul - ra → [ŋʊ́rʊldʌ̀]

'tree'

bundul - ra → [bʊ́ndʊldʌ̀]

'the bush'

onar - ra → [ɔ́nʌrdʌ̀]

'his bone'

The cluster restrictions governing the behavior of /w_2/ (that is, the w which alternates with g rather than b) are hard to specify in detail because, outside of a few reduplicating forms such as "waŋgun" (see example on p. 30) w_2 occurs in only two places. One of them is on the "irrealis" morpheme /-w_2a_2/ (for which see pp. 121f.). Its behavior there is not predictable from the cluster restrictions of sec. 1.1.3. As noted above (p. 30), /w_1/ may occur following any of several non-nasal consonants, including r, as indicated for w on table 3. /w_2/ on the other hand, may not occur as such after r, but is strengthened to g in this position, e.g.,

/b - ar - w_2a_2 - $\sqrt{w_1u}$/ → [bʌ́rgɔ]

3pl. -1sg. incl.- irrealis - 'hit' 'we might hit them'

This r__ position (for further examples of which, see pp. 125, 134) is the only post-non-nasal-consonantal position in which w_2 is attested.

The other position in which w_2 can be said to occur is word-initially, on the w_2 class demonstratives ganda, guno, gandinja (see table 7, p. 46), where it is strengthened to g. This particular strengthening seems impossible to specify in phonological terms, since w_2 also occurs in unstrengthened form in the same phonological environment. (Compare, for example, the w_2-class-prefixed verb form wanga 'it went'.) Rather, this strengthening should be seen as a morphologically specific one, like the second-degree strengthenings discussed below (sec. 1.2.2.2).

An examination of table 3 reveals that the phoneme y may not occur following any consonant. Accordingly both of the morphophonemes $/y_1/$ and $/y_2/$ undergo first-degree strengthening when following all consonants after which they are attested. This has already been illustrated for the post-nasal positions. The following forms show strengthening after other consonants:

		/y_2/		
/yanar	-	$y_2$ali/	→	[yáʌrdʌ̀li]
'little twigs'		'indeed'		
/miyul	-	$y_2$ali/	→	[míyʊldʌ̀li]
'mule'		'indeed'		
		/y_1/		
/gulal	-	y_1u/	→	[gúlʌldjù]
'bamboo'		lat.		
/onmal	-	y_1u/	→	[ɔ́nmʌldjù]
'white ochre'				
/daydj	-	y_1u/	→	[dáydj djù]
'dust' (English borrowing)				

1.2.2.2. Second-Degree Strengthening

The environments for second-degree strengthening, unlike the above, are probably impossible to specify in strictly phonological terms. Rather, second-degree strengthening takes place only in certain morphologically specific environments. It is unambiguously attested only for /w_1/, /b/, and /w_2/.

For example:

/w_1/

/wu	→ $\sqrt{w_1 a}$ - n/	→	[(w)ú̀mbʌn]
w-class sub.	'fall' pres.		'it falls'

/ma_2	- $\sqrt{w_1 awa}$ - n/	→	[mumbá>wʌn]
m-class - 3sg. ob.	sub. 'be ignorant of' pres.		'he is ignorant of it' (m-class)

(for a_2 → u, see sec. 1.2.4.1)

/b/

/ba_2	- $\sqrt{y_1 ibu}$ /	→	[bɛ́mbu]
imp. - masc. ob.	'throw'		'throw it'

(for ba_2-, see sec. 2.2.6.1)

/w_2/

mυ_2	- w_2a_2 - $\sqrt{y_1 i}$	→	[mʊŋgɛ]
m class sub.	irr. 'be'		'it might be'
			(for a_2+ y_1i→e, see sec. 1.2.4.2)

a_1	- ∅ - w_2a_2 - $\sqrt{w_1 u}$	→	[á^ ŋgɔ]
sg. masc. ob.	3 sg. sub. irr. 'hit'		'he might hit him'

There is a general tendency for second-degree strengthening to

occur in positions where it serves to break up sequences of V + glide + V + glide + V which would otherwise coalesce into a single, morphophonemically ambiguous vowel. This is true, for instance, of the two examples given under "w_2" above. But second-degree strengthening is by no means automatic in such environments, nor does it always serve this function when it does occur, as illustrated by the other examples above.

1.2.3. Some Additional (Morpho) Phonological Rules Affecting Consonants

Several other phonological processes besides consonant strengthening have been silently introduced into the above discussion of that phenomenon.

1.2.3.1. Elision

On p. 31, I introduced two elision rules g→Ø/_b and dj→y/_b, which were adequately described and exemplified there. Both rules could be subsumed under a more general rule by which dj and g are weakened to corresponding continuants before b. That is, $\left\{\begin{matrix} dj \rightarrow y \\ g \rightarrow w_2 \end{matrix}\right\}$ /_b.

1.2.3.2. Nasal Assimilation

In the examples of sec. 1.2.2.1., I brought in the following nasal-stop assimilations:

nj → m / __ b

nj → n / __ d

n → nj/ __ dj

These rules answer to cluster restrictions noted above (sec. 1.1.3). Obviously these processes are amenable to a more general formulation, which could be done with alpha rules operating on whatever features are used to specify the relevant places of articulation. Here I will only make two general observations about these assimilations.

First note that the assimilations are all retrogressive: sounds assimilate to those which follow them. This is a general principle of Ngarinjin phonology, which holds for all assimilations I have discovered in the language (see pp. 38-41).

The second point I wish to make about these assimilations has to do with their relationship to one of the phonetic interpretation rules discussed earlier (sec. 1.1.2.3.1.1.). The rule I refer to is the one which says that /i/ before /nj/ is realized as [i] (rather than [I], which is its "elsewhere" value). It is apparent that this rule will interact with the nasal assimilations discussed above, because all those assimilations either create or remove an instance of nj. Consider the output of derivations where both rules apply:

/linj - w_1a/	→	[límbʌ]
'watch' iter.		
/njin - ∅ - $\sqrt{y_1}$ila - n/	→	[njínjdjIlʌn]
2 sg. 3 sg. 'hold' pres.		'he holds you'

From such examples we can conclude that the vowel assimilation rule which determines the phonetic realization of /i/ must precede the nasal assimilation rules discussed above. If the order were reversed, the above forms would be realized as [lImbʌ] and [njínjdjIlʌn]. The fact that the rules are ordered in this way will have important consequences for the morphological description below (see p. 115).

1.2.3.3. De-retroflexion

Note from the examples of sec. 1.2.2.1 that ṛ after first degree strengthening almost always ends up as d rather than ḍ. It is realized as ḍ only when following another one of the apico-pre-palatals ḍ, ṇ, or ḷ.

This agrees with the restriction, discussed above (sec. 1.1.3) whereby ḍ does not occur following any consonant except another apico-pre-palatal. Precisely how the indicated "de-retroflexing" rule is to be written will depend on the feature system by which the phonology is analyzed. Using for now the ad-hoc feature "RETRO.," we can write the rule as follows:

$$\dot{d} \rightarrow d \; / \; \begin{bmatrix} +\text{CONS} \\ -\text{RETRO} \end{bmatrix}$$

1.2.4. Vowel Alternations

1.2.4.1. /a_2/ Assimilation

Note that the morphophonemic inventory given above in table 4 includes two distinct /a/'s which I label /a_1/ and /a_2/.

/a_2/ is a strictly abstract unit which, unlike /a /, never emerges as surface [a]. When followed by a consonant (except in one of the forbidden sequences /a_2 + yi/, /a_2 + w_1u/, or /a_2 + $w_2a_{(2)}$/, /a_2/ becomes a high vowel; i or u depending on which consonant follows.

In order to describe these (V)(c) assimilations in a systematic and economical way, we need a cross-cutting classification which groups certain consonants with certain vowels. The distinctive feature which allows us to do this in the most natural way is one which was part of the original Jakobsonian System (Jakobson, Fant, and Halle 1952, pp. 29-30), but was later rejected by Chomsky and Halle (1968, p. 303ff.); that is the feature grave/acute, or +/- grave.

With respect to this feature, the units which take part in this assimilation may be grouped as in table 5.

Given this classification, we may describe a_2 assimilation as follows:

$$/a_2/ \rightarrow \begin{bmatrix} +\text{ high} \\ \alpha \text{ grave} \end{bmatrix} \; / \; \underline{\quad} \; + \; \begin{bmatrix} +\text{ cons.} \\ \alpha \text{ grave} \end{bmatrix}$$

TABLE 5

GRAVITY SPECIFICATIONS OF SOME UNARINJIN SEGMENTS

	+ Grave	- Grave
Vowels	u	i
Consonants	m, ŋ, w_1, w_2	y_1

That is, /a_2/, when followed by a morpheme boundary which is followed by a consonant, becomes a high vowel which agrees with that consonant in gravity. (Actually, one could just as well leave the morpheme boundary specification out of this rule, because /a_2/ occurs only morpheme-finally, or, more precisely, is distinguishable from /a_1/ only by its behavior at morpheme boundaries. I have included a morpheme boundary specification, +, in the rule just so that one does not lose sight of that fact.)

The following are some examples of this process. All of them are taken from Unarinjin verbal morphology, because it is the only domain in which /a_2/ is distinguishable from /a_1/. When citing "compound verb" forms (see sec. 2.2.13), I have omitted the phonetic form of the verbal particle, since it is not relevant in any of the examples. For an account of the morphemes involved, see sec. 2.2.

$$a_2 \rightarrow u \,/\, \_\_\ m$$

/ada	ba_2	+	√ma/	→	[búmʌ]
'sit'	imp.		'do'		'sit!'

/a_1	-	ŋa_2	-	√malima	-	ra/	→	[aˆŋumálImʌrə]
3 sg. masc. ob.		1 sg. sub.		'spear'		past		'I speared him'

$a_2 \rightarrow u$ / __ŋ

andu /gunda$_2$ - ∅ - √ŋuḷu - n/ → [gʊ́ndʊ̀ŋʊḷʊn]

'he' 2 pl. ob. 'give' pres.
'he gives to you'

wa /ban - ∅ - w$_2$a$_2$ - √ŋuḷu/ → [báŋgʊ̀ŋʊḷu]

'not' 3 pl. 1 sg. irr. 'give'
'I don't give to them'

$a_2 \rightarrow u$ / __w_1

ŋarwa /nja$_2$ - √w$_1$a-ni/ → [njùwáni]

'fall' 3 sg. fem. 'fall' past
'she fell'

wedj /ba$_2$ - w$_1$a$_1$/ → [bɔ́wʌ]

'sleep' imp. 'fall'
'go to sleep!'

(for ɔ conditioning see pp. 21-22)

$a_2 \rightarrow u$ / __w_2* (w_2* means: "a w_2 which undergoes second degree strengthening")

/wu - na$_2$ - w$_2$a$_2$ - √w$_1$u/ → [wúnuŋgɔ]

w-class ob. 2 pl. sub. irr. 'act on'

$a_2 \rightarrow i$ / __y

/a - ŋa$_2$ - √y$_1$a - ni/ → [áŋiyʌni]

3 sg. masc. 1 sg. 'argue with' past
'I argue with him'

andu /ŋara$_2$ - ∅ - √y$_1$o - n/ → [ŋáriyɔn]

'he' 1 pl. inc. ' 'follow' pres.
'he follows us'

/a_1/ differs from /a_2/ only in that it does not undergo this "gravity assimilation" when followed by a consonant, but remains as a.

For example,

/a_1 - $\sqrt{ma}$ / → [ámʌ]

3 sg. masc. 'do'

/a - Ø - $\sqrt{ŋulu}$ - n / → [áŋʊlʊn]

3 sg. masc. 3 sg. 'give' pres.
'he gives to him'

ŋarwa /$ŋa_1$ - $\sqrt{w_1a}$ - n / → [ŋáwʌ n]

'fall' 1 sg. 'fall' pres.

1.2.4.2. Vowel Coalescence

We have seen above (sec. 1.1.3) that there are some consonant sequences which are allowed at the juncture between word and postposition, but not within the word. Conversely, there are some sequences which are disallowed just at certain kinds of morpheme boundaries within the word, but are permitted elsewhere.

The morpheme boundary at which special restrictions apply is the boundary between pronominal prefix or prefix combination (see sec. 2.2.2) and whatever follows. As I have discussed above in connection with phonetic long vowels (pp. 19-21), there is a prohibition on the sequence (v_i)-(corresponding glide)-(v_i), i.e., iyi, uw_1u, aw_2a. At the juncture between prefix and following element, there is a further restriction against a + (glide) (homorganic vowel). That is, /yi/, /w_1u/, or /w_2a_2/ may not be realized as yi, wu, or wa respectively when following a.[1]

---

[1] Where I have omitted the subscripts on a and y, this means that /a_1/ and /a_2/ behave identically; likewise, /y_1/ and /y_2/. a and y then are "phonemic level" cover terms for these respective pairs of morphophonemic units.

When the sequence a + (glide) + (homorganic vowel) is present underlyingly, the three segments coalesce to form a single surface vowel, as follows:

/a + yi/ → e

For example,

/a_1 - $\sqrt{y_2 i}$ / → [ɛ·]

3 sg. masc. ob. 'be' 'he is'

/a_1 - ŋa_2 - $\sqrt{y_1 ila}$ - n / → [ʌŋɛ́lʌn]

3 sg. masc. ob. 1 sg. sub. 'hold' pres. 'I hold him'

/wa_2 - $\sqrt{y_2 i}$ / → [wɛ·]

w-class sub. 'be' 'it is'

/a + - $\sqrt{y_1 ibu}$ + n/ → [ɛ́bʊn]

3 sg. masc. ob. 3 sg. sub. 'throw' pres. 'he (or she) throws him'

/a + w_1u/ → o (There are no examples of a + w_2u)

For example,

/a_1 - $\sqrt{w_1 u}$ - n / → [ɔn]

3 sg. masc. ob. 3 sg. sub. 'hit' pres. 'he hits him'

/a_1 - ŋa_2 - $\sqrt{w_1 u}$ - n / → [ʌŋɔn]

3 sg. masc. ob. 1 sg. sub. 'hit' pres. 'I hit him'

$$/a + w_2a/ \rightarrow a:$$

For example,

/ŋada$_2$	- w_2a_2	- √ŋulu /	→	[ŋʌda:ŋulu]
1 pl. inc. ob.	3 sg. sub.	irr.	'give to'	'he might give to us'

/gunda$_2$	- w_2a_2	- √w_1u /	→	[gundãũ·]
2 pl. ob.	3 sg. sub.	irr.	'hit'	'he might hit you'

1.2.4.3. Vowel Syncope

a_2, when followed by another vowel, is dropped, leaving the other vowel unaffected.

For example,

/a_1	- ŋa_2	- √iniŋa	- n /	→	[a˃ŋIniŋʌn]	
3 sg. masc.	1 sg.	'put'	pres.			

/ba_2	- $a_1$nja_2	- √maṛa /	→	[bʌnjúməɾə]
imp.	fem. ob.	'take'		

This completes the discussion of general morphophonemic processes in Uŋarinjin. More specific processes--those characterizing the behavior of single morphemes--will be incorporated into the "Morphology" section below.

CHAPTER 2

MORPHOLOGY

2.1. Nominal Morphology

2.1.1. Free-standing Personal Pronouns

The free-standing personal pronouns of Ŋarinjin are shown in Table 6.

TABLE 6

PERSONAL PRONOUNS

	Singular	Non-singular	
1st person	ŋin	Inclusive: ŋarun	Exclusive: njarun
2nd person	njaŋan	nurun	

The non-singular pronouns may be suffixed for more precise number specification with dual suffix -njiri or paucal suffix -njina.

Any of these pronouns may take any of the nominal suffixes and/or postpositions described below (sec. 2.1.5.4). Where an optional number suffix is present on one of the non-singular forms, the number suffix precedes all others.

nurun	- njiri -	gu	- ŋa	→	[nʊrʊnjIrigʊŋʌ]
2nd per. non-sg.	- dual -	dative	- 'only'		'only for you two'

2.1.2. Gender-bearing Pronouns

"Gender" in Unarinjin, as in most languages which have it, is confined to "non-participant" (traditionally called "third person") nouns. In Unarinjin, gender is not indicated on lexical nouns (as it is in the related language, Worora). It is, however, indicated on third person pronouns.

2.1.2.1. Anaphors

The anaphoric pronouns are as follows:

djiri	-	masculine
njindi	-	feminine
mindi	-	m-class neuter
di	-	w_2-class neuter
biri	-	neuter collective and human plural

The semantics of this classification will be discussed below (sec. 2.1.5.1).

Morphologically, these gender-bearing anaphoric forms may be analyzed as consisting of an anaphoric base -ri (cf. the "definite subject" verb prefix -iri-, sec. 2.2.8), with gender prefix dji-, njin-, min-, Ø, or bi-. The -r of this base -ri becomes -d by first degree strengthening (see sec. 1.2.2.1). For #Ø + ri → di, we can posit a rule #r → d, a rule which is supported by the fact that r does not occur word initially, while d does.

2.1.2.2 Demonstratives

The anaphoric forms discussed above are used primarily for pointing back to something which has been present in the flow of speech in which they occur. There is another set of gender-bearing pronouns which

are used primarily for pointing to something which is present in the situational context of the utterance. These demonstrative pronouns, which inflect for distance along a "proximity to speaker" axis as well as for gender, are shown in table 7.

TABLE 7

DEMONSTRATIVE PRONOUNS

	'here'	'over there'	'way over there' (usually out of sight)
masculine	djinda	djino	djindinja
feminine	njinda	njino	njindinja
m-class neuter	munda	muno	mindinja
w_2-class neuter	ganda	guno	gandinja
neuter collective and human plural	bunda	buno	bundinja

These forms may be analyzed as demonstrative base + positional suffix. The demonstrative bases, which vary for gender, are djin-, njin-, min- ∿ mun-, gan- ∿ gun- (i.e., $w_2$an- ∿ $w_2$un-, with word-initial consonant strengthening), and bun-. Note that two of these (njin- and min-) are formally identical to their counterparts in the anaphoric series discussed in sec. 2.1.2.1, and the rest are quite similar.

The positional suffixes are:

proximal: -da (or ṛa?)

distal: -o

hyperdistal: -dinja (or ṛi-nja?)

2.1.2.3. Ambiphoric Pronouns

There is a third series of gender-bearing pronouns which are inherently neither anaphoric nor demonstrative. Nonetheless they are functionally more closely related to the anaphoric set than to the demonstrative, because their use is conditioned by factors in the linguistic context rather than in the context of situation. Specifically, these pronouns are used to introduce a new topic.

These ambiphoric, topic-introducing pronouns are as follows:

andu - masculine

njandu - feminine

mandu - m-class neuter

wandu - w_2-class neuter

bandu - neuter collective and human plural

Formally, these pronouns seem to be built on an ambiphoric base -andu, with gender prefixes Ø-, nj-, m-, w-, and b-. (Or perhaps a-, nja_2-, ma_2-, wu-, ba_2- with elided vowels as per sec. 1.2.3.1).

It should be pointed out that, although these pronouns are functionally ambiphoric, they usually combine phrasally with a corresponding demonstrative when used to refer to something present in the context of situation, i.e., andu djinda, 'this one (man) here', bandu buno, 'those people over there'.

2.1.3. Interrogative Pronouns

The most commonly-occurring interrogative pronouns are njangi and anjdja, which translate fairly precisely as 'who' and 'what'. Both njangi and anjdja may function as head nouns, e.g.,

njangi biri
'who' 'they'
'Who are they?'

anjdja di
'what' 'it'
'What is it?'

njaŋgi ḍar amaṛa
'who' 'stand' 'he did'
'Who stood up?'

anjdja maṛa woni
'what' 'see' 'it he did'
'What did he see?'

But only anjdja may function attributively, and it is used this way with both human and non-human head nouns, e.g.,

anjdja ŋala njindi?
'what' 'meat' 'it'
'What meat is that?'

anjdja woŋay maṛa njinjdjoni
'what' 'woman' 'see' 'her you did'
"What woman did you see?'

There is another set of interrogative pronouns which does decline for gender. They are built on a base -iriya, with gender prefixes ∅, nj, m, w_2, b, i.e.,

iriya - masculine

njiriya - feminine

miriya - m-class neuter

wiriya - w-class neuter

biriya - neuter collective and human plural

Coate and Oates (1970, p. 32) call these "locative interrogatives." Usually they can be translated as 'where', e.g., njiriya, 'where is she?', miriya 'where is that thing of the m-class?' But there is at least one, perhaps idiomatic, use in which this is not true: wiriya is the interrogative form for asking the name of something, e.g.,

alŋun wiriya

'his name'

'What is his name?'

As these examples suggest, the -iriya interrogatives are used only in copulative constructions, i.e., those which translate into English as 'where is . . . ?' There is another locative interrogative, gunjal, which is used adverbially. It does not decline for gender.

For example,

gunjal njinayiri - 'where are you going?'

'you are going'

gunjal ada amaṛa - 'Where did he sit down?'

'he sat down'

There is an apparently related word gunja, 'what', which functions more like German was than English what insofar as it is never used attributively. (Cf. anjdja, pp. 47-48). Although textually quite frequent, gunja is severely limited in distribution. It seems to occur only with the verb √ma, 'do, say' (which is one of the most frequently occurring verbs in the language).

For example,

gunja budmeri

'they are saying/doing'

'What are they saying/doing?.'

[gunja [[ŋima] njinmeri]]

'I will do' 'you are doing'

'What do you want to do?'

(see sec. 3.3.1.3 for this syntactic construction type)

2.1.4. What-cha-ma-call-it?

There is a set of gender-bearing interrogative pronouns which are used only as "hesitation" forms, like English "what-cha-ma-call-it" or "what's his/her name." These are formed on a base -andimi, which is prefixed for gender:

andimi	-	masculine
njandimi	-	feminine
wandimi	-	w-class neuter
mandimi	-	m-class neuter
bandimi	-	neuter colletive and human plural

It is interesting that even these hesitation forms should decline for gender. Unarinjin speakers apparently can often recall the gender of a word even when the word itself escapes them. But this may not always be the case. For often the word wandimi is used regardless of the gender of the word the speaker is trying to recall. This is probably because words for 'word', 'name', etc. are of the w-class neuter gender (see sec. 2.1.5.1). So wandimi can mean 'What's the word?'

This hypothesis is borne out by the fact that there are at least three other hesitation pronouns which seldom or never decline for gender, all of which seem to be "frozen" w-class forms. They are:

umbun

umbaru

unjunjdja

My texts include examples of gender inflection only for the first two of these three, and there is only one example in each case. These are the m-class form mumbun and the masculine form ambaru. Elsewhere these words always appear in the w-class forms given above, regardless of the gender of the antecedent.

Often, however, the gender is made explicit by the pairing of one of these hesitation forms with a gender-bearing anaphoric or demonstrative pronoun, e.g.,

umbun djiri
masc. anaphor
'what's-his-name'

ṇunjdja muna
m-class demonstrative
'what's-its (m-class)-name'

Thus, although the w-class forms are often used to evade the issue of gender, one cannot conclude that they are always used for that reason.

2.1.5 Lexical Nouns

As indicated above, lexical nouns are of five classes or "genders," which are overtly signalled by agreement with the various pronominal elements which stand for them. The form of the nouns themselves seldom provides any clue of their gender. One exception, noted by Capell and Elkin (1937, p. 229) is that a high proportion of the nouns which end in -n are of the w_2 class; about 90 percent of them, I would guess. Of nouns ending in -an, an even higher percentage are of this class. But there are exceptions in both cases, most of which are motivated by overriding semantic considerations. Words for 'places' for instance are likely to be considered "m-class" even if they end in -n. A very frequently occurring example is the word dambun 'camp, clan territory', which is m-class. (for other such examples, see p. 54). Other words sometimes fluctuate in gender depending on such considerations. There are, for instance, many kinds of birds which have (species) names ending in -n, which are usually treated as w-class; e.g., djuwiban 'greater bower bird', djiringun 'owlet night jar'. But when these birds become "personalized" as characters in myths, they tend to be treated as grammatically masculine or feminine.

Another generalization put forth by Capell is that "Ṇarinjin nouns in -ṙ are Class IV (m-class)" (ibid.). But this rule has so many exceptions that I find it untenable even as a "percent rule."

2.1.5.1. The Semantics of Gender

In general, gender in Ṇarinjin has less to do with semantics than with discourse reference maintenance, which is its primary function (cf. sec. 4.5 below, and Rumsey, forthcoming, p. 40ff.). There are, however, some general correlations which tend to hold between grammatical gender and various semantic features.

2.1.5.1.1. Masculine, Feminine, and b-class

Virtually all nouns referring to humans are masculine, feminine, or b-class (plural). Males are masculine. Females are feminine. Indeed, one of the semantic functions which the gender system sometimes serves is to allow for the derivation of human nouns from non-human (usually non-animate) ones.

There is a word wulun, for instance, whose primary meaning is 'paperbark tree or basket made from its bark'. When used in this sense, this word is of the -w_2 class, e.g., wulun di. But sometimes wulun is treated as a feminine class word, e.g., wulun ṇjindi. In these cases, it always means, not 'bark basket', but 'woman'. The semantic relation underlying this derivation is a metonymic one, bark baskets having traditionally been women's gear par excellence.

For some other similarly distinguished animate/inanimate pairs it is difficult to assign derivational priority to either member of the pair.

For example,

banman	di	⟷	banman	djiri
'magic'	w_2 class neuter		'magician'	masculine

ṛambaṛ	di↔ṛambaṛ	njindi
'barrier, screen'	w_2 class neuter	'(potential) mother-in-law' feminine

If pressed to assign derivational priority in such cases, I would treat the human nouns as "bahuvrihi-" like zero derivatives on the inanimate ones, as in the wulun example above.

Although all nouns referring to humans are of the masculine or feminine gender, not all nouns of these genders refer to humans.

For example:

ŋara	njindi
'honey found in trees'	feminine
maraṇi	njindi
'sun'	feminine
gaṇgi	djiri
'moon'	masculine
aṇdari	djiri
'opossum'	masculine

Some nouns referring to humans are not inherently masculine or feminine, but alternate between the two depending on the sex of the person referred to.

For example:

yila	djiri	yila	njindi
'child'	masculine	'child'	feminine
'little boy'		'little girl'	
marul	djiri	marul	njindi
'grey haired'	masculine	'grey haired'	feminine
'grey haired old man'		'grey haired old woman'	

Among nouns referring to humans, none is inherently of b-class. Rather, human nouns are pluralized by being transferred to this class.

For example:

woŋay	njindi	woŋay	biri
'woman'	feminine	'women'	

wiyila	djiri	wiyila	biri
'young man'	masculine	'young men'	

Thus, among the human nouns, the b-class functions as a number category rather than as a gender.

This is almost, but not quite true of its use among non-human nouns as well. There it is used not as a pluralizer, but as a kind of "collectivizer," giving a sense something like "a mess of."

For example:

ŋala	njindi	ŋala	biri
'meat'	feminine	'some meat, a mess of meat'	

me	mindi	me	biri
'vegetable food'		'mess of vegetable food'	

These non-human "collectives" are syntactically distinguishable from human "plurals" in that the latter can control dual and paucal number agreement on the verb (see sec. 2.2.9) while the latter cannot.

2.1.5.1.2. M-class Neuter

The only generalization I can make about m-class nouns which is, as far as I know, exceptionless, is that they never refer to human beings. There are, on the other hand, several semantic domains with which this class is characteristically associated.

One of these domains is that of "place." As one of my informants put it, "That 'mindi', that's a little bit on the 'place' side." Almost all proper toponyms are of the m-class, e.g.,

ganberar	mindi
a place near Grace's knob, on Mt. House Station	

gandan	mindi
'Womera	Creek'

manuŋgu	mindi
range of hills around, and including, Mt. Barnett	

bangaramban	mindi
a certain crossing on the Charnley River	

Not only proper toponyms, but also most nouns for kinds of places are of the m-class, e.g.,

wawi mindi
'plain'

dambun mindi
'camp'

baṛudu mindi
'war-ground'

mayaṛa mindi
'house'

Another semantic domain associated with the m-class is plants, especially edible ones, e.g.,

ganmaŋgu mindi
'yam'

uŋgalu mindi
'a wild beet-like tuber'

wanjdja mindi
a certain yam-like tuber with lettuce-like leaves, grows in open places

madjal mindi
'grass'

Nouns for quite a few body parts are of this class, though perhaps equally many are of the w_2 class.

2.1.5.1.3. W_2-class Neuter

As in the case of m-class, the only exceptionless generalization about the w_2 class is that no nouns of this class refer to human beings. Again, though, the class has characteristic associations.

If -m- is the gender of "place," w_2 is the gender of time.

For example:

wanaran di
'late afternoon'

lewaran di
'mid-day'

uguli di
'morning, tomorrow'

lalan di, murumay di, wundir di
all words for 'dreamtime'

Another characteristic association of the w_2 class is with rocks and minerals, e.g.,

rargi	di	All generic terms for 'stone now also used to mean 'money'
gayugun	di	
manjdjan	di	
banarun	di	'sandstone'
garamban	di	'clay'

Although most plants are m-class, trees, wood, and objects made from it are predominantly of the w_2 class, e.g.,

ŋurul	di	'tree'
djuŋulan	di	'boab tree'
wuran	di	'wood'
winjdjaŋun	di	'firewood'
wulun	di	'paper-bark tree or basket made therefrom'
wulumundu	di	'digging stick'

One fact about the w_2 class which is of great importance for the study of Ŋarinjin syntax and discourse structure (cf. p. 195 below) is that it contains words referring to language itself.

For example,

wulan	di	'language, word, or a stretch of speech of any size'
bara bara	di	'a talk'
wulŋun	di	'its name' (see sec. 2.1.5.2.1 for gender inflection)

2.1.5.2. Possessive Inflection

Ngarinjin morphology includes four distinct means of indicating possession, the choice among which is conditioned partly by the nature of the thing possessed and partly by phonotactic considerations. (See p. 95 for the fourth morphological means of indicating possession, and p. 181 for a fifth, syntactic means.)

2.1.5.2.1. Prefixation

There is one kind of possessive inflection, viz.: prefixation, which, among possessed nouns, is used only for body parts. (But see sec. 2.1.5.2.4 below for another, syntactically distinct function served by the same morphology.)

Curiously, not all words for body parts take these possessive prefixes. For some body parts, possession is shown by the same method described below (sec. 2.1.5.2.3) for "alieniably possessed" items.

One is tempted to look for some semantic differentia as a controlling factor here. It would be pleasing to discover an implicit bifurcation of the anatomic field into one set of parts which were "highly inalienable," e.g., bones, mouth, back, etc., and one set which were rather more alienable, e.g., hair, foreskin, teeth, etc. But, as can be seen from the examples below, no such factor is at work.

The sole differentia is instead a phonological one, for the discovery of which we are indebted to A. Capell (1972). The principle he adduces to explain these data is "no prefixation without initial vowel," the (non-semantic) spirit of which is certainly correct, and the letter of which is more or less correct depending on how one decides to segment the prefixed body-part words.

Since I am not sure of "God's truth" in this matter, I think it

best that I present enough data to allow the reader to be able to choose for himself from among competing varieties of "hocus-pocus."

More indisputably true than Capell's principle is its converse: "no initial vowel without prefixation." In other words, there are no body-part words with initial vowel which indicate possession by any means except prefixation. I know of only one possible exception: ilmbi, 'sternum' a vowel-initial word which does not take prefixes. But, as explained above (p. 23), there is no distinction between word-initial #i- and #yi, so one can just as well rescue our principle from exceptions by spelling this word yilmbi.

The problem with Capell's statement as it stands is that there may be some prefixable body-part stems which do not begin with vowels.

Consider the paradigms listed in table 8. Whether or not one is to regard all these body-part stems as vowel-initial will depend on where one makes the cut between prefix and stem. Capell's choice, which is also followed by Coate and Oates, is to regard all the prefixes except 1. sg. as consonant-final, i.e., ŋi- njun-, Ø-, nj-, m-, w-, ŋar-, njar-, gur-, and bur-, and to assign any following vowel to the stem.

The main problem with this solution is the one presented by forms like 1.f and 3 f-j above. The stems here would have to be -uṇar and -muḷar, whereas elsewhere they would be -oṇar and -amuḷar. Neither Capell nor Coate-Oates deals with this problem. I can see two ways in which they might handle it. First, they could simply set up suppletive stems for these and the many other body-part words which behave like them. This would add to the complexity of the lexicon, especially since the suppletive pattern differs for different stems, as is illustrated by the fact that none of the three paradigms above agrees with any other in this regard.

TABLE 8

BODY-PART PREFIXATION

Paradigm 1

1.	a.	ɲiyonar	-	'my	bone(s)'
1.	b.	njuɲonar	-	'your (sg.)	" '
1.	c.	onar	-	'his	" '
1.	d.	njonar	-	'her	" '
1.	e.	monar	-	'its (m class)	" '
1.	f.	wunar	-	'its (w class)	" '
1.	g.	ɲaronar	-	'our (inc.)	" '
1.	h.	njaronar	-	'our (excl.)	" '
1.	i.	guronar	-	'your (pl.)	" '
1.	j.	buronar	-	'their (pl.)	" '

Paradigm 2

2.	a.	ɲiyembularu	-	'my	foot (feet)'
2.	b.	njuɲembularu	-	'your (sg.)	" '
2.	c.	embularu	-	'his	" '
2.	d.	njembularu	-	'her	" '
2.	e.	membularu	-	'its (m class)	" '
2.	f.	wembularu	-	'its (w class)	" '
2.	g.	ɲarembularu	-	'our (incl.)	" '
2.	h.	njarembularu	-	'our (excl.)	" '
2.	i.	gurembularu	-	'your (pl.)	" '
2.	j.	burembularu	-	'their	" '

Paradigm 3

3.	a.	ɲiyamular	-	'my	forehead'

TABLE 8--Continued

3.	b.	njuŋamuḷar	-	'your (sg.)	forehead'
3.	c.	amuḷar	-	'his	" '
3.	d.	njamuḷar	-	'her	" '
3.	e.	mamuḷar	-	'its (m class)	" '
3.	f.	wumuḷar	-	'its (w class)	" '
3.	g.	ŋarumuḷar	-	'our (incl.)	" '
3.	h.	njarumuḷar	-	'our (excl.)	" '
3.	i.	gurumuḷar	-	'your (pl.)	" '
3.	j.	burumuḷar ∿ buramuḷar		'their	" '

A second possible solution under the "consonant-final prefix" hypothesis would be to set up a single basic form for each body-part stem and to account for alternating initial vowels by means of morpho-phonological assimilation rules. This would be easy enough for cases such as 1.f. and 3.f., V → u / w__ being a fairly "natural" sort of rule. On the other hand, the rule required for cases such as 3.f.-j., one which converts a (but no other vowel) to u after r, seems quite bizarre. Both of these rules would have to be morphologically specified as applying only to prefixed possessive forms, as they are not only unnecessary, but frequently violated elsewhere. Thus, this solution is suspect on grounds of ad-hocness as well as bizarreness. Another very serious problem with it is that it posits progressive assimilation, whereas all other assimilations in Ṉaṛinjin are retrogressive (see p. 37).

What I think is a more acceptable solution starts with the positing of an underlying set of pronominal prefixes which all include final vowels, as in table 9.

TABLE 9

BODY-PART PREFIXES

1. sg.	ṉiya$_1$-	1 pl. incl.	ṉara$_2$-
2. sg.	njuṉa$_2$-	1 pl. excl.	njara$_2$-
3. sg. masc.	a$_2$-	2 pl.	gura$_2$-
3. sg. fem.	nja$_1$	3 pl.	bura$_2$- bura$_1$-
m class	ma$_1$-		
w class	wu-		

Now let us assume that each of the three paradigms of table 8 (pp. 59-60) is built on a single stem, and that the stems are -wuṉar, -yimbuḷaru, and -muḷar respectively.

All but one of the forms in the representative paradigms above can then be accounted for by rules already developed in the phonology above (sec. 1.2.4), all of which are independently motivated within the realm of verbal morphology (see sec. 2.2 below).

Consider paradigm 1 Form 1.f., wunar, which arises from underlying wu + wunar. All the other forms show an o vowel which arises from a_1 + wu or a_2 + wu, as per page 42.

Consider paradigm 2. The -e- in every form except 2.f. arises from a_1 + yi or a_2 + yi. For 2.f. we can posit a rule which is a more general version of a + yi → e, namely V + yi → e. Or one could dispense with the rule and simply mark this and related forms as exceptions due to analogic levelling.

Paradigm 3 is where the distinction between a_1 and a_2 does its work. Recall that a_2 differs from a_1 only in that it assimilates to a following consonant, whereas a_1 does not (sec. 1.2.4.1). This accounts for the prefix-final -u- vowels in forms 3.g.-3.j. The prefix final -u- of 3.f. is, by this solution, present underlyingly, and so needn't be explained by any phonological rule.

While I propose this solution as a less defective one than the other solution outlined above, it too is not without its defects. First, note that, in order to allow for forms such as 2.f., we had either to add a somewhat ad-hoc rule to the phonology or mark them as exceptions. Second, although this solution accounts for the u vocalism of forms such as 1.f., it leads us to expect a phonetic [u:] (as per sec. 1.1.2.3.1.2). What occurs instead is [u].

The third problem with this solution is one which brings us back to the question which led to this discussion of segmentation in the first place, viz.: What are the criteria for distinguishing between stems which

take possessive prefixes and those which do not? Capell's segmentation, whatever its problems, has the merit of providing a clear and simple answer to this question, to wit: "No prefixation without initial vowel." If one segments the prefixed forms in the way I have proposed above, this principle will not stand, for it assumes consonant-final prefixes. Where Capell, based on this assumption, would isolate stems -onar, -embularu, -amular, I would posit underlying -wunar, -yimbularu, -mular. Stems beginning with glide + homorganic vowel, such as -wunar and -yimbularu are, under my segmentation, still distinguishable as "prefix-taking" according to purely phonological criteria. For no non-prefixing stem begins with glide + homorganic vowel even though there are many which begin with glides. Stems beginning with r or any stop consonant are likewise distinguishable as non-prefixing under this segmentation. The problem comes when we consider stems which begin with l, l, or any nasal consonant. Some of them take prefixes and some do not. Examples are given in table 10.

TABLE 10

SOME PREFIXING AND NON-PREFIXING BODY-PART STEMS

Prefixing		Non-Prefixing	
-langa	'tail'	larad	'sole'
-langun	'head'	langan	'trachea'
-manul	'cheek'	malambar	'armpit'
-namala	'hand'	nungu	'upper arm'
-nanal	'wrist'		
		njumbanban	'bridge at nose'
-ngulu	'penis'	ngunjdjungunjdju	'whiskers'

There is no apparent semantic criterion for this formal differentiation: it would be surprising if there were since it is clear that only phonotactic considerations are relevant in the case of vowel-initial and stop-initial stems. One is forced, then, to mark each stem beginning with l, ḷ, or a nasal as a "prefixing" or a "non-prefixing" stem under the segmentation proposed here. The necessity for this lexical marking of some stems is clearly a major drawback to this proposed segmentation.

But given the drawbacks of the Capell-Coate-Oates solution pointed out above, I consider this one, on balance, to be less defective than that.

2.1.5.2.2. Suffixation

There is a specific means of indicating possession just for cases where the thing "possessed" is a person who stands in a certain specified relationship to the "possessor." This quasi-possessive relationship is indicated by pronominal suffixes which attach to stems specifying which relationship is at stake. Giving English glosses for these relationship terms is extremely difficult, and involves us in some hotly contested questions in anthropological theory which are beyond the scope of the present investigation. Here I will sidestep the question by giving as glosses English words with which the Ngaṛinjin themselves translate these relationship terms when speaking English.

Some examples of suffixed stems of this type are:

gayi - ɲi	'my granny' ('granny belonga me')
ira - ni	'your (sg.) father, your son'
ɲara - naŋga	'his mother' ('mother belonga im')
mara - njurumbu	'our (excl.) wives' ('big mob wayb belonga me bela')
margʼorumburu	'their brothers, their cousin brothers' ('big mob brother belonga that mob')

gundi - ŋiri 'my husbands' ('big mob husband belonga me')

wa(ya) - nudna 'your (pl.) boss' (i.e., marriage authority, that is, potential wife's brother or father) ('boss belonga you mob')

As can be seen from these examples, the "possessive" suffixes for human relationship stems are complex, specifying the person and number of the "possessor" (i.e., person or people standing in the given relationship) and the number of the "possessed" (i.e., person or people to whom one stands in the given relationship). The number system here is a relatively collapsed one, comprising only two categories: singular and non-singular.

The complete inventory of complex suffixes is given in table 11.

TABLE 11

HUMAN RELATIONSHIP SUFFIXES

Possessor	Possessed	
	Singular	Non-Singular
1 sg.	-ŋi	-ŋiri
2 sg.	-ni	-niri
3 sg.	-ŋaŋga	-ŋaŋgari
1 pl. inc.	-ŋaruna	-ŋarumbu
1 pl. ex.	-njaruna	-njarumbu
2 pl.	-nudna	-nurumbu
3 pl.	-yiduga	-(wur)umburu

It is evident that some or all of these semantically complex suffixes are also morphologically complex and can be reduced to component

morphemes which vary independently for: 1) number of possessed; 2) person of possessor; and 3) number of possessor.

Consider first the suffix sequences which incorporate marking for singular possessor. Here the segmentation is especially clear. There are first, second, and third person singular possessor morphemes -ŋi-, -ni-, and -naŋga- respectively, followed by possessed number morphemes -Ø or -ri for singular vs. non-singular respectively.

The segmentation of suffix sequences including non-singular possessor marking is somewhat less clear-cut. For the singular possessed forms, one has the choice of regarding the na ∿ ga ending as either a non-zero singular possessed marker, or as a part of the possessor morpheme. I would prefer the latter, because -na occurs elsewhere (see sec. 2.1.5.4.2 and sec. 2.2.9) as a non-singular marker. We may therefore regard it as an additional, redundant marker of non-singularity of possessor, and assume a zero marker for singular possessed. The -ga allophone cannot be related to anything else in Uŋarinjin morphology, as far as I know. For non-singular possessed, we can segment a non-singular morpheme mbu, which may be regarded as a second-degree strengthened form (see sec. 1.2.2.2) of the non-singular morpheme which occurs elsewhere (see sec. 2.1.2) as bu ∿ bi. In the 3 pl. + non-singular suffix -(wur)umburu, this -mbu- element is augmented by another, redundant non-singular marker -ru (cf. -ri, above and sec. 2.2.9 and sec. 2.1.5.4.2).

I have noted in the previous paragraph that, with the exception of -ga, all of the non-singular morphemes used in these compound suffixes, viz.: -ri, -ru, -na, and mbu, can be related to non-singular markers occurring elsewhere in Uŋarinjin morphology. But my use of the term "non-singular" conceals certain dissimilarities. For -ri and -na are used elsewhere for dual and paucal numbers respectively. The number system in

which they participate here is, as I have noted, a semantically "collapsed" one, comprising only two categories rather than four. It is interesting to note that, under these conditions, they lose their semantic distinctiveness and fall together with -mbu as mere allomorphs implementing a generalized "non-singular" category.

All of the "person" (or person-number) markers for possessor also have clear affiliations elsewhere in the morphology. As elsewhere (cf. sec. 2.2.2), 3rd person, or "non-participant" is marked by a zero disinence. The 3 sg. form -nanga is actually Ø + nanga, where -nanga is a general "possessive" marker (cf. sec. 2.1.5.4.3.6). -ŋV-, as elsewhere (cf. sec. 2.2.2) marks "first person," or [+ego] -nV-, as elsewhere (cf. sec. 2.2.12) marks second person, or [+tu]. -nja-, as elsewhere (cf. sec. 2.2.2) is a special "exclusive" first person marker, specifying [+ego], [-tu]. "Plurality" or "non-singular" is marked by r ∿ d added to the person markers.

Of the suffix sequences given above in table 11 (page 65), all of the consonant-initial ones except -ni combine with the human relationship stems in a phonologically straightforward manner. No sandhi rules apply (except on the stem mara-, for which see p. 69).

The same is true of -ni except when it is suffixed to a stem ending in -a; in which case the -a sometimes changes to -i by what may be a kind of lexically conditioned vowel harmony. Precisely which stems undergo this change and which do not appears impossible to specify by phonological, semantic, or any other sort of general criteria, and so must be entered in the lexicon as in table 12.

Two other -a stems, ira-, 'father, son' and ŋara- 'mother' have been omitted from table 12 because they are neither assimilating nor non-assimilating with respect to the -ni suffix. Rather, they show

TABLE 12

ASSIMILATING VS. NON-ASSIMILATING -A STEMS

Assimilating	Non-assimilating
gaya - 'granny'	mariya - (no English gloss in common use)
mara - 'wife'	mala - 'daughter' (women speaking)
waya - 'boss'	
marga - 'brother, cousin-brother'	
mama - 'uncle'	
ŋola - 'brother, cousin-brother'	
lala - 'sister'	

special suppletive stem forms just for first person (singular or non-singular) possessor, and show a zero desinence in place of the expected -ni for the first person singular possessor + singular possessed. The forms based on these special first person suppletive stem forms are shown in table 13.

TABLE 13

SUPPLETIVE STEM FORMS FOR 'MOTHER' AND 'FATHER'

	Possessed		
Possessor	Singular		Non-singular
1 sg.	idja	'my father'	idjari
	ŋadji	'my mother'	ŋadjiri
1 pl. inc.	idjaŋaruna		idjaŋarumbu
	ŋadjiŋaruna		ŋadjiŋarumbu
1 pl. ex.	idjanjaruna		idjanjarumbu
	ŋadjinjaruna		ŋadjinjarumbu

The stem mara- '(potential) wife' shows an irregularity which can be explained by a phonological rule which is lexically conditioned in that it does not apply to other human relationship stems of similar phonological shape. Before any compound suffix beginning with n, the final a of mara is dropped and the r is strengthened to d.

For example:

/mara - ni /	→	madni
'wife' 'your one'		'your (sg.) wife'
/mara - ŋga /	→	madnaŋga
'wife' 'his'		'his wife'

But:

/mala - ni /	→	malani
'daughter (woman ego)' 'your'		'your daughter'
/ŋola - ŋga /	→	ŋolaŋga
'older brother, cousin brother' 'his'		'his older (cousin)-brother'
/ŋara - nurumbu /	→	ŋaranurumbu
'mother' 'your (pl.) several'		'your (pl.) mothers'
/ira - niri/	→	iraniri
'father' 'your (sg.) several'		'your (sg.) fathers'

When the suffixes -yiduga and -wurumburu combine with stems ending in a, the a coalesces with the following -i or -u to yield e or o respectively, as per sec. 1.2.4.2.

For example:

/ira -yiduga /	→	ireduga
'father, son' 'our one'		'our father, son'
/ŋara - wurumburu/	→	ŋarorumburu
'mother' 'their several		'their mothers'

2.1.5.2.3. Independent Possessive Pronouns

For body-part words which are ineligible for prefixation under the criteria developed above (sec. 2.1.5.2.1) and words for all other possessed things except human relatives (for which see sec. 2.1.5.2.2 above), possession is indicated by a genitive postposition on the possessor NP (for which see sec. 2.1.5.4.3.6) and/or by complex free-form possessive pronouns which decline for the person, number, and gender of the possessor, and the number of the thing possessed.

Some examples of the latter are:

ṛaŋgu	ŋinaŋga
'heart	'my' sg.
'my heart'	
dambun	budaga
'country'	'their' sg.
'their country'	
woŋay	njadaḍagari
'women'	'our' (du. ex.) pl.
'the several wives belonging to us two'	
yinda	anaŋaŋga
'spear(s)'	'his' pl.
'his spears'	

ŋamun njanaŋgari

'breast' 'her two'

'her two breasts'

These complex pronominal forms are based on initial person-number elements which are similar or identical to those used for prefixed possessives (see sec. 2.1.5.2.1) and intranstive verbs (see sec. 2.2.2.1). These initial elements are given in table 14.

TABLE 14

INITIAL ELEMENTS OF INDEPENDENT POSSESSIVE PRONOUNS

1.	sg.	ŋi-	1 pl.	inc.	ŋad-
2.	sg.	njuŋa-	1 pl.	exc.	njad-
3.	sg.	a-	2 pl.		nud-
		nja-	3 pl.		bud-
		wa-			
		ma-			

These elements specify the person, number (singular vs. non-singular) and gender of the possessor. They are suffixed with elements which carry further information about the number of the possessor, and also specify the number of the possessed. These suffixes are given in table 15.

Like the human-relationship suffixes analyzed above (sec. 2.1.5.2.2), these suffixes are morphologically complex, but here the number-marking works differently. The full set of four number categories is maintained for possessor throughout and for possessed just in case the possessor is singular. Where the possessor is non-singular, the number system for possessed collapses in a most unexpected way. The four-term system becomes

TABLE 15

COMPOUND SUFFIXES OF INDEPENDENT POSSESSIVE PRONOUNS

Number of Possessor	Number of Possessed			
	Singular	Dual	Paucal	Plural
sg.	-nanga	-nangari	-nangana	-nananga
du.	-agari	-agari	-agari	-adagari
pauc.	-agana	-agana	-agana	-adagana
pl.	-aga	-aga	-aga	-adaga

a two-term one, but instead of the syncretism among the non-singular terms which we find elsewhere, here there is a syncretism among the non-plural terms, so that singular, dual, and paucal comprise a common category which is opposed to plural.

Note that here, unlike among the human-relationship suffixes, -na and -ri retain their usual meanings: paucal and dual respectively. But the final position in which they occur on these suffixes is associated with two different functions, between which it alternates according to whether the possessor is singular or non-singular. When the possessor is singular, the -ri and -na signal dual or paucal possessor. What this alternation does is to take advantage of certain redundancies in the system to effect a counter-balancing economy by allowing a single order-class to serve two different functions. Where the first element of the suffix is -nanga-, the possessor can only be singular (already a redundant mark, since 'singular possessor' is inherent in the initial element to which -nanga is suffixed). The final position is then free to serve another function: number marking for 'possessed'. But where the first element of the suffix is -aga-, only "non-singularity" of

possessor is signalled, in which case further marking is required if the distinction between plural, paucal, and dual possessor is to be signalled overtly. In this case the four-way distinction among number of possessed is dispensed with and the final position is instead used for this further specification of number of possessor, by means of the same morphemes -ri and -na.

Plurality of possessed is indicated by -na- before the -nanga when possessor is singular and by -ad- before the -aga- when possessor is non-singular. The -na which occurs before -nanga may be the same 'non-singular' -na morpheme which occurs elsewhere in this paradigm with its more highly specified meaning 'paucal'. Alternatively, -nananga may be a reduplicated form of -nanga, reduplication being a regular means of signalling plurality in the language (cf. sec. 2.1.5.4.2). Likewise, -ad- may be related to the plural morpheme -r- ∿ -rV-, or, on the other hand, may be the result of reduplications of the form: ŋadaga → ŋadadaga, budaga → budadaga, etc.

2.1.5.2.4. Adjectives

Morphologically, adjectives resemble body-part words (see sec. 2.1.5.2.1). Some of them take pronominal prefixes and some do not. The adjectives which do take prefixes agree in person, number and gender with the noun which they modify, as exemplified in table 16.

Examples of non-prefixing adjectives are:

budu	'small'
dubala	'red, yellow'
djedan	'straight'
gali - galidj	'crooked'
medjeri	'two'

TABLE 16

ADJECTIVE PREFIXATION

ŋiyaner	'great'	1 sg.
njuŋaner	"	2 sg.
aner	"	3 sg. masc.
njaner	"	3 sg. fem.
maner	"	m class
wuner	"	w class
ŋaraner	"	1. pl. incl.
njaraner	"	1. pl. excl.
guraner	"	2 pl.
buraner (often in reduplicated form: buranener)	"	3 pl. & b class
ŋiyongara	'first-born, elder'	1 sg.
njuŋongara	"	2 sg.
ongara	"	3 sg. masc.
njongara	"	3 sg. fem.
mongara	"	m class
wungara	"	w class
ŋarongara	"	1 pl. incl.
njarongara	"	1 pl. excl.
gurongara	"	2 pl.
burongara (often in reduplicated form: burongongara)	"	3 pl. & b class

TABLE 16--Continued

ŋiyeri	'one'	1 sg.
ŋuŋeri	"	2 sg.
eri	"	3 sg. masc.
njeri	"	3 sg. fem.
meri	"	m class
weri	"	w class
ŋareri	(i.e., 'we are one people')	1 pl. inc.
njareri	"	1 pl. excl.
gureri	"	2 pl.
bureri	"	3 pl.

Some more examples of non-prefixing adjectives are:

nima	'heavy'
njilnjil	'solid'
widje	'different'
yolulu	'cool'
rowa	'white'

As is evident from the paradigms of table 16 and the non-prefixing examples above, both the principle which distinguishes prefixing adjectives from the non-prefixing ones and the forms of the prefixes themselves are identical to those set out above (sec. 2.1.5.2.1) for body-part words (these paradigms, for example, being derivable from those same prefixes plus roots aner, $w_1$ungara, and $y_1$iri respectively). The entire morphology is identical, so the analysis need not be repeated here.

The formal difference which does allow us to distinguish body-part

words from adjectives is not morphological, but syntactic: the former control gender agreement, while the latter do not. Each body-part word, whether or not it carries a prefix cross-referencing the possessor, bears its own gender, independent of that of the possessor, which is reflected by gender agreement on the pronominal elements with which the body-part word enters into appositional relations. The adjective on the other hand does not bear gender inherently, but only secondarily, by agreement with the (often only implicit) noun which it modifies. Compare, for example, the two sets of noun phrases given in table 17.

Being of the w-class, the word for 'eye' takes the w-class pronoun di, regardless of the gender of the possessor noun. The word for 'great', on the other hand, does not bear gender; the pronoun instead shows the gender of the head noun, as does the adjective. (For more on the syntax involved here, see sec. 3.1.2).

2.1.5.3. Personal Names

Of the many alternate means of "naming" among the Ngarinjin, two, namely metronymy and patronymy require some discussion here because they make use of morphology which has no other function in the language.

A metronym may be formed from any lexical noun or adjective (with implicit head noun), as long as that noun is understood to be capable of definite reference to a unique female individual, by the addition of the suffix -yali~ -ali. The -yali allomorph occurs after words ending in vowels; -ali occurs elsewhere.

For example:

Mowanbarayali	-	'The son or daughter of Mowanbara'
Membinali	-	'The son or daughter of Membin'
Aniwerali	-	'The son or daughter of Aniwer'

TABLE 17

THE SYNTAX OF BODY-PART WORDS VS. ADJECTIVES

Body-part	ari	djinda	ambul	di
	'man'	'that' masc. 'that man's eye'	'his eye'	'it'(w-class)
	wonay	njinda	njambul	di
	'woman'	'that' fem. 'that woman's eye'	'her eye'	'it'(w-class)
	gulurogan	ganda	wumbul	di
	'dove'	'that'w-class 'that dove's eye'	'its eye'	'it'(w-class)
	duramala	munda	mambul	di
	'black cockatoo'	'that'w-class 'that black cockatoo's eye'	'its eye'	'it'(w-class)
Adjective	ari	djinda	aner	djiri
	'man'	'that' masc. 'that great man'	'great' (masc.)	'he' (masc.)
	wonay	njinda	njaner	njindi
	'woman'	'that' fem. 'that great woman'	'great' (fem.)	'she'
	gulurogan	ganda	wuner	di
	'dove'	'that' w-class 'that great dove'	'great'(w-class)	'it'(w-class)
	duramala	munda	maner	mindi
	'black cockatoo'	'that' m-class 'that great black cockatoo'	'great'(m-class)	'it' (m-class)

Patronyms are likewise formed by the addition of -walo. I am reluctant to call this element a suffix, for two reasons. First, the -w does not undergo the expected strengthening after consonants (see sec. 1.2.2.1). The second reason, which is probably related to the first, is that walo also occurs as an independent word, meaning 'offspring'. One should, therefore, perhaps think of -walo patronyms as compounds. Examples are:

Wadjawalo	-	'son or daughter of Wadja'
Djunjulanwalo	-	'son or daughter of Djunjulan'
Njambarwalo	-	'son or daughter of Njambar'

Double (e.g., patronymic → metronymic), and perhaps multiple derivations are possible, e.g.,

Nurguwaloyali	-	'the offspring of Nurgu's daughter'
Danbiwaloyali	-	'the offspring of Danbi's daughter'

2.1.5.4. Post-nominal Elements

In addition to the suffixes which occur only on demonstrative and or anaphoric pronouns (see sec. 2.1.2), and those which are used only to form personal names, there are a number of suffixes and postpositions with more general inflectional and derivational functions, which may be used on any of the above-discussed classes of nominal words, viz.: pronouns, lexical nouns, and adjectives. Many of these suffixes and postpositions are not strictly post-nominal elements, but also occur on finite verbs and/or verbal particles. There are yet other suffixes which are used to derive nouns from verbs. In general, my policy will be to postpone the discussion of these latter two (i.e., nominal-verbal, and deverbal-nominal) types of suffix/postposition until after I have laid out the morphology of

the Ŋarinjin verb. But I will depart from this policy insofar as it is convenient to give special treatment here to elements which, though they occur on both nouns and verbs, function somewhat differently on each.

2.1.5.4.1. On the Terms "Suffix" and "Postposition"

Some preliminary remarks are in order on the distinction between suffixes and postpositions. Both suffixes and postpositions are equally "bound" forms, but they differ in that while the former are word-bound, the latter are phrase- or clause-bound. Accordingly, while a suffix always occurs on the word with which it is in syntactic constituency, regardless of the position of that word with the phrase or clause, a phrase-bound postposition characteristically occurs on the last word of the phrase in which it is in constituency. Compare, for example, the behavior of the two post-nominal elements shown in table 18.

Clause-bound postpositions occur either: after the first word of the clause (e.g., -ga, sec. 2.6.4.3), or in some other syntactically specifiable position (e.g., -ŋari, sec. 3.3.1.1).

There is another formal manifestation of the split between suffixes and postpositions which, though induced by differences in their syntactic scope, is detectable at the word level. This is that, when both suffixes and postpositions are present in a given word, the suffixes usually precede the postpositions.

For example:

Maŋulaniriyu						
Maŋulan	-	ali	-	ri	-	yu
		metronymic suffix		dual suffix		lative postposition

'to the two offspring of Maŋulan'

dambun	-	da	-	ga
'camp'		locative postposition		interrogative suffix

'in the camp?'

TABLE 18

POSTPOSITION VS. SUFFIX

dambun		budaga[1]	-	ra
'camp'		'their'		locative
	'at their camp'			postposition
budaga		dambun	-	da
'their'		'camp'		locative
	'at their camp'			postposition
yila	-	ri		budaga
'child'		dual suffix		'their'
	'their two children'			
budaga		yila	-ri	
'their'		'child'	dual	
	'their two children'			

[1]This word order, i.e., possessed-possessive pronoun, is the preferred one, but the reverse order, as in the next example, also occurs occasionally (cf. sec. 3.1.2).

Corresponding more or less closely to this distributionally-based distinction between suffixes and postpositions is a phonologically-based distinction between what we can call "tightly joined" and "loosely joined" word elements. Between a loosely joined element and whatever precedes it there exists what I have called a "loose juncture." One of the criteria for distinguishing the loose juncture is that some consonant clusters occur there which are not permitted within a single morpheme (see sec. 1.1.3). Another is that the vowels /i/ and /u/ show allophones before a loose juncture which are otherwise reserved for word-final position (sec. 1.1.2.3.1). A third criterion is that loosely joined elements are stressed independently of the elements to which they are attached, one

of the syllables of the postposition always bearing second degree stress (cf. Coate and Oates 1970, p. 78), while tightly joined elements are stressed as part of the word in which they occur, hence often receiving only tertiary stress.

I have said that the distinction between tightly joined and loosely joined word elements corresponds "more or less closely" to that between suffixes and postpositions. More precisely, the relationship is this: all tightly joined elements are suffixes, but not all suffixes are tightly joined; some suffixes, and all postpositions, are loosely joined. In other words, a cross-cutting classification by distributional and phonological criteria yields only three of four possible types: loosely-joined suffixes, tightly-joined suffixes, and loosely-joined postpositions. Tightly-joined postpositions do not occur.

2.1.5.4.2. Number Suffixation

A word of any of the nominal classes discussed above may be suffixed for dual or paucal number. For pronouns which have distinct stems for singular vs. non-singular, the dual and paucal suffixes are attached to the non-singular stems.

The suffixes are shown in table 19.

TABLE 19

DUAL AND PAUCAL NOMINAL NUMBER SUFFIXES

	Dual	Paucal
After vowels and glides	- yiri ∿ - ri	- yina ∿ - na
Elsewhere	- njiri	-njina

I am unable to give a systematic explanation for the yi ∿ ∅ variation in the post-vocalic allomorphs. There is some tendency for speakers traditionally associated with the southwestern part of Unarinjin territory to favor the -yiri, -yina variants, while more easterly speakers tend to favor -ri, -na. But I have even heard variations within the speech of a single speaker. This variation may be characterized as competition between weakly-joined and tightly-joined variants of the post-vocalic allomorph: while -ri and -na are tightly-joined, -yiri and -yina are loosely joined, as are "elsewhere" allomorphs, -njiri and -njina.

It will be observed that there is no overt "plural" suffix. For pronouns, "plural" is signalled by a zero suffix on the non-singular stem form. Correspondingly, "plural" is functionally the least marked of the non-singular number categories: plural forms are <u>sometimes</u> used even when the referent is semantically dual or paucal, but dual or paucal forms are never used when the referent is multitudinous.

On lexical nouns, which have no separate non-singular stem forms, "plural" is signalled, if at all, by reduplication. Interestingly, reduplicated lexical nouns are used with semantically dual or paucal referents far less frequently than are plural-form pronouns. Unlike the zero suffix on non-singular pronouns, nominal reduplication seems to convey a definite meaning of multiplicity.

It bears remarking here that, although these number suffixes <u>may</u> be used on any of the nominal types discussed above, dual suffixes actually occur very infrequently, and paucal even less frequently, on any nominals except personal pronouns. The signalling of plurality by reduplication is also quite infrequent, though perhaps less so than nominal number suffixation. The unreduplicated, unsuffixed form of a lexical noun or non-prefixing adjective, which is by far the most common form, carries no

information at all about number. Such forms may refer to one, two, three, or any number of things. Within the Ŋarinjin number system, they can only be characterized as non-non-singular. For such forms, number is signalled only by concord with various pronominal elements external to the noun or adjective itself. Among prefixing adjectives, a certain amount of number information (singular vs. non-singular) is carried by the prefix (see sec. 2.1.5.2.4).

2.1.5.4.3. Case Postpositions

The distinction between grammatical and non-grammatical cases (for which see Rumsey forthcoming, pp. 1-9) in Ŋarinjin is reflected directly at the morphological level: grammatical case relations are signalled only by cross-reference on the verb (with one possible exception, for which, see pp. 88-92), and non-grammatical cases are signalled mainly by the nominal postpositions treated immediately below.

The names I have given to these non-grammatical cases should be taken with a grain of salt. The range of functions carried out by some particular, formally distinct case in any language depends on its relations of paradigmatic opposition to other cases in that language, so there is never a precise cross-linguistic equivalence between two cases from different languages. The Ŋarinjin "instrumental" case, for instance, is different from the Sanskrit instrumental case partly because Ŋarinjin has a separate "comitative" case, while Sanskrit does not. The Sanskrit instrumental covers many of the functions of the Ŋarinjin comitative in addition to those of the Ŋarinjin instrumental.

But if one considers not just the structure of functional differences among formally distinct cases, but also the structure of differences among functions served by the same case, a certain cross-linguistic

comparability emerges. For among the functions served by a given case, some are more central or "basic" than others, and these are similar from language to language, even if the respective ranges of peripheral or "derived" functions are not.

Many languages, for instance, have a basically adnominalizing case which, minimally, can be used to indicate some kinds of "possession." Any such case in any language (or, where several occur, the least specialized one) may justifiably be called a "genitive," regardless of what other idiosyncratic functions it may serve in some language. Thus I have no qualms about calling the Uṇaṛinjin postposition -naṇga a "genitive" case marker even though it also occasionally serves other, adverbial functions (see sec. 2.1.5.4.3.6) which do not figure in the cross-linguistic definition of the "genitive."

Some of the traditional case designations may even be more appropriate for Uṇaṛinjin cases than for some cases which go by those same names in some more well-known languages. The Uṇaṛinjin "instrumental," for instance, can be seen from the discussion above (and below, sec. 2.1.5.4.3.7) to be, at heart, a more purely "instrumental" case than is its Sanskrit counterpart (which latter, I submit, could more appropriately be called a "comitative" case, that being its more basic function, from which the textually frequent "instrumental" one is secondarily derived).

2.1.5.4.3.1. Locative. The locative postposition is /-ṛa/, which strengthens regularly to -ḍa (→ da) as per sec. 1.2.2.1.

Its range of meaning covers most of the senses of English 'at', 'on', 'in', French 'chez' and German 'bei'.

For example:

bililu	muna	wondu-ṛa	gariwa	ṇariwayiri
'raft'	'that (those)'	'saltwater'-loc.	'paddle'	'we are going'

'We are paddling those rafts in the saltwater'

wulan wuniyaŋari wulun-da winiŋa!

'words' 'beautiful' 'paper'-loc. 'put' (imp.)
'Put beautiful words down on paper!'

ada budmara dambun ŋininga-ra

'sit' 'they did' 'camp' 'my' loc.
'They sat down at my camp'

mindjal ŋarinji Mowaldjiyali - ra

'eat' 'we were' loc.
'We ate chez Mowaldjiyali'

The locative postposition can also be used to mean 'in the time of', e.g.,

malmal-da di gunja - ŋa

'white' loc. 'then' 'what' only
'What (happens) in the era of the whiteman?'

aman inji alwaŋari gaŋaŋgan-da

'die' 'he has' 'old man' present loc.
'Now the old man has died'

The -ra postposition is not used with an "instrumental" or "agentive" meaning. I point this out because Coate and Oates, at the time when they wrote their Grammar of Ngarinjin were under the impression that there were two distinct cases marked by ra, a locative and an instrumental agentive, the latter occurring only on pronouns and proper nouns (Coate and Oates 1970, pp. 25-27). But careful checking with informants has convinced me that instrumental-agentives in -ra do not exist. Mr. Coate himself, I believe, now agrees with me on this point (personal communication). Most likely, this mirage arose out of attempts to translate English passive sentences which included expression of the agent. Ŋarinjin, like

many other languages of the world, simply has no regular grammatical means for doing so.

2.1.5.4.3.2. Adessive. There is a very infrequently used case signalled by the postposition -ŋunda which means 'in the vicinity of', which, following Hjelmslev's terminology (Hjelmselv 1935, p. 151), I call "adessive."

For example:

ganmanja -ŋunda

'around Kunmunja (mission)'

diŋgal dar ama-ŋari mindi, buralan - ŋunda

'Kangaroo's leg bone' 'stand' 'it does' 'where' 'the (place) Buralan-Adessive

'where the kangaroo's leg bone stands up, in the vicinity of Buralan (junction of Plain Creek and Isdell River)'

Perhaps the reason this case is so seldom used is that it is really a specialized form of the locative case. The locative can be used to mean 'in the vicinity of' (see the fourth ra example above), but usually means 'at'. -ŋunda is called into use when the speaker wishes clearly to specify that something is 'not at, but in the vicinity of'.

Given this close semantic relationship between locative and adessive, it is tempting also to see a formal connection between -ra and -ŋunda, the latter being the expected result (see sec. 1.2.2.1) of the combination: /-ŋun + ra /. This temptation is strengthened by the fact that sequences of more than one postposition do occur (see p. 94). But such an argument would have to be based on comparative-historical evidence: -ŋun does not occur as a postposition in present-day Uŋarinjin.

2.1.5.4.3.3. Allative. There is a postposition -biynj which translates very nicely into English as -ward (-wards), toward, towards. Like its English counterparts, it usually signals motion in some particular direction, but sometimes not. Sometimes there is only the more general sense of "orientation" in a particular direction.

For example:

balala umbani wulan di ŋarinjin, gandinjabyinj, gandabiynj

'spread out' 'it fell' 'language' 'it' Ŋarinjin w-class hyp.-all. w-class prox.-all.

'The Ŋarinjin language spread out, way over that way, and in this direction.'

balja amaṛa , waṛiŋari - biynj

'flee' 'he did' 'eastern region' - all.
'He fled eastward.'

2.1.5.4.3.4. Lative-Translative. There is a postposition /-y_1u/, realized as -yu or -dju as per sec. 1.2.2.1, whose range of uses is one of the most interesting features of Ŋarinjin grammar. This range breaks cleanly into two distinct kinds of functions, which may appear so different as to raise doubts about whether this postposition really does stand for a single, semantically unified case.

First, there are the 'concrete' functions: those having to do with spatial relations. As a local case, -y_1u signals 'motion up to, or as far as'.

For example:

ba alu yuwenoljeŋŋari -yu

'come' 'he does to here' lat.
'He comes up here to Yuwenoljeŋŋari'

dinda yaridj muwan monduma-yu Marada mindi

'right there' 'go down' 'it falls''saltwater'-lat.'Isdell' 'it'
'Right there the Isdell River goes down to the saltwater (ocean).'

di Wiyidŋu anduman Weṛa-yu

'then' (man's name) 'he takes them'(man's name) lat.
'Then Wiyidŋu takes them to Weṛa.'

As discussed in Rumsey forthcoming, nominal postpositions in Uŋaṛinjin do not normally indicate grammatical case relations. Conversely, noun phrases which are cross-referenced on the verb do not ordinarily bear case postpositions. This is true in all of the -y$_1$u examples above, and of all of the other postpositions discussed in this section. But there are other, non-lative uses of -y$_1$u which flagrantly violate this principle.

For example:

ŋabun - dju ḍol waŋga

'water' 'burst forth' 'it went'
'The water burst forth'

abun - dju dulwur aŋga

'harpoon' 'break' 'it went'
'The harpoon broke'

ŋiyamad - dju baṛidj wi

'my kidney' 'rise' 'it is'
(Idiom for 'I'm happy')

ŋala - yu djuwara birinji

'animals' 'popped out' 'they did'
'The animals popped out' (of the stomach of a white egret who had eaten too many, causing him to burst)

winjdjaŋun - dju guṇinba wadiniŋanja

'firewood' 'cover' 'let's do to it'
'Let's cover the firewood'

In all these instances where one of the noun phrases cross-referenced on the verb takes a $-y_1u$ postposition, the meaning conveyed by $-y_1u$ seems to be quite different from the concrete "lative" sense discussed above. How are such examples to be interpreted?

The first thing to note is that $-y_1u$ adjuncts are not just randomly paired with all manner of Unarinjin verbs, but tend to occur with verbs with particular semantic properties, to which verbs they bear certain specific adjunct relations. Typically they are, as in the first four examples above, intransitive verbs which predicate (of their -dju-suffixed subjects) the undergoing of some "emergence" or other (often violent) action over which the subject usually has no control. Much less often a $-y_1u$ adjunct, as in the last example above, occurs with a transitive verb, in which case the $-y_1u$ adjunct is usually the <u>object</u> NP, or semantic "patient," not the transitive "subject" or "agent" NP. This agrees with the fact that -dju adjuncts, when serving as intransitive subjects, usually refer to entities which undergo some action which is beyond their control. For the "agent" in a transitive construction is usually in control of the action, while the patient is not (cf. Dixon forthcoming).

But none of these generalizations is exceptionless. The verb in the fifth example above, for instance, is not a verb of "emergence" or "violent action." Nor does this use of $-y_1u$ <u>always</u> signal a lack of "control" on the part of the referent of the NP thus marked (see the second example on p. 90).

The only exceptionless generalization I can make about these $-y_1u$ adjuncts and the verbs with which they are paired is that the action of the verb is one which involves a "change of state" in the entity referred

to by the -y_1u adjunct. This characterization is probably far too general. There are probably other much more specific criteria which govern such pairings. But until I am able to describe them more precisely than I have above, I will treat the "change of state" criterion as basic, and hence label this particular use of -y_1u its "translative" function, as opposed to the concrete "lative" function discussed earlier. Although -y_1u has this translative meaning whenever it occurs on a cross-referenced adjunct NP, not every translative -y_1u occurs on a cross-referenced adjunct.

One type of non-cross-referenced NP which regularly takes translative -y_1u is the class of factive complements, e.g.,

njindi amaḷar guḷin ama-ŋari njoṇar-dju waṇḍidj njurwan

'she' 'birth' 'he does'-rel. trans.'make her' 'they do'
'She to whom a man of the amaḷar moiety gives birth, they make into a woman of the oṇar moiety' (i.e., the rule of moiety exogomy is not respected any more: such a woman actually belongs to the amaḷar moiety)

ŋala - y_1u waṇḍidj iriwiŋga

'bird' trans. 'make' 'he did to himself'
'He made himself into a bird'

Likewise, in intransitive clauses of "becoming," with verb $\sqrt{y_2 i}$, the NP referring to that which the subject has become takes -y_1u, e.g.,

yilan - dju gara ŋinji

'child' trans. 'suppose' 'I was'
'Suppose I had become a child'

buradi malwa - yu minji

'their livers' 'bad' trans. m-class-'be'-past
'Their livers became upset'

In addition to its functions in factive and "becoming" clauses, translative -yu is used on some other non-cross-referenced NPs whose

relationship to the verb is looser and more difficult to specify. Often, such translative NPs seem to do the work of an independent clause, though lacking a verb, e.g.,

amulu - yu gura ŋga

'well' trans. 'walkabout' 'he went'
'Having gotten well, he went on walkabout'

yedj - dju debar ŋga

'laugh' trans. 'die' 'he went'
'He died laughing'

mandu bedja djoŋari - yu ŋala gude buri amara

'stomach' 'already' 'big' - trans. 'meat'- com. 'stupor' 'he did'
'His stomach having become huge with meat, he fell into a stupor'

Such uses of the translative case I will call "translative absolute" constructions. It may be, though, that these absolute constructions occur not only with -y_1u in its translative sense, but with the more concrete lative meaning as well. This depends on how one chooses to interpret such rare examples as:

brum - dju ada ŋamara

(Town called) 'Broome' 'sit' 'I did'
'Having reached Broome, I sat down (stopped)' ??

In the discussion so far I have treated lative -y_1u and translative -y_1u almost as if they were two totally distinct cases; as if their morphological identity were mere accident. Such a treatment appears justifiable not only on semantic grounds, but on syntactic ones as well: lative y_1u is confined to non-cross-referenced (i.e., non-subject/object) NPs, while translative - y_1u occurs regularly on cross-referenced NPs, and on complements in factive and "becoming" clauses, i.e., in construction

with the verb $\sqrt{y_2 i}$ (see sec. 2.2). The "absolute" construction, unlike these others, is difficult to define in purely syntactic terms, and the boundaries around it are somewhat vague, but if it exists, it may provide evidence against a strict separation of lative and translative $-y_1 u$.

Nonetheless, I will make such a separation here, again with the provision that my terminology is not to be taken too seriously. In order to make my interlinear translations easier to understand, I will label each instance of $-y_1 u$ as either "lative" (lat.) or "translative" (trans.), rather than using the more cumbersome "lative-translative." This should not be taken to imply that the morphological identity between the two is purely accidental. On the contrary, it reflects a close semantic relationship which is especially clear in the case of factive and "becoming" complements. The process of "becoming" something different from what was is easily thought of as a "movement" to that new state, and thus the concrete, lative meaning of $-y_1 u$ may readily serve as a metaphor for the more abstract translative meaning. Alternatively, since all movement involves a change of state, the lative meaning may be thought of as merely a special case of the more general translative meaning.

2.1.5.4.3.5. Dative. There is a postposition -gu which serves some of the functions associated with the dative case in some Indo-European languages. (Most of them are served by dative-benefactive suffixes on the verb, for which see sec. 2.2.12.) Usually -gu can be translated by English 'for', e.g.,

wanaliri djod - ba njarinji Wati - gu

'dance' 'we did' (man's name) dat.

'We danced the Wanaliri corroboree for Wati'

djoli njarinji warg - gu

'return' 'we did' 'work' dat.
'We returned for work'

Secondarily, and far less frequently, -gu serves a purely 'local' function, marking an NP which is the 'goal' of a transitive or intransitive verb, e.g.,

bura djoli ŋay mawanjdjama - gu

'should' 'return' 'I go' 'Mowanjum' dat.
'I'd better return to Mowanjam'

maŋari muŋumaŋa bandidjan - gu

'food' 'I took it' 'Pantijan' dat.
'I took food to Pantijan'

In some instances -gu is ambiguous between this local function and the other, purposive-benefactive sense. This is true in the latter example immediately above, where bandidjan-gu can also mean 'for (the people at) Pantijan,' and in the following example, which I have discussed with informants regarding just this point:

di Wiyidŋu anduman Weŗa - gu

'then' (man's name) 'he takes them' (man's name) dat.
'Then Wiyidŋu takes them to/for Weŗa'

Informants agreed that both the 'to' and the 'for' translations of this sentence were possible, but rule out the possibility that Wiyidŋu could be taking the things to someone besides Weŗa, for Weŗa's sake. (Such a meaning would be conveyed instead by using a benefactive suffix on the verb, for which, see sec. 2.2.12.) Thus the local meaning must remain, but a benefactive sense is added to it as well.

It will be noted that the local meaning of -gu is very similar to

that of lative -y_1u, discussed above (sec. 2.1.5.4.3.4). Previous works on Unarinjin (Coate and Oates 1970, p. 26, Coate and Elkin 1974, p. 195, 246, 302) have distinguished the two by saying that -gu means 'to', and -y_1u (their ju ∿ dju) means 'as far as'. While I will not deny this claim, I must confess that I was unable to elicit any such difference from informants, or to discover any minimal pairs which would suggest any difference in local meaning between the two. Rather, the difference which seems most salient to informants is the one which results from the admixture of non-local meaning, discussed above. For instance, when asked to comment on any possible difference between the second example sentence on the top of page 88 and the last example sentence given on page 93, which differ only by the presence of -y_1u vs. -gu, informants agreed that the former, with Wera-yu could mean that Wera was given the objects with the intention that he in turn should pass them on to someone else, while the latter, with Wera-gu, could only mean that the objects were given to Wera for him to keep.

That -y_1u and -gu are very similar if not identical in their local meanings is indicated by the fact that one is often added to the other, always in the order -gu-yu, with no apparent change in meaning from that conveyed by either of them alone, e.g.,

amini djoli birinjeri, dambu - gu - yu, dambu - gu

'altogether' 'return' 'the two did' 'camp' dat. all. 'camp' - dat.

bedja ŋayari

'now' 'we two go'

'Those two went all the way back to the camp, (so) now we two go back to the camp.'

2.1.5.4.3.6. Genitive. Possession is indicated mainly by means of the free-standing possessive pronouns discussed above (sec. 2.1.5.2.3). One of the morphemes which enters into that system of complex pronouns is -nanga, which combines with person-number prefixes as a general singular possessive morpheme.

But -nanga also occurs as a postposition on lexical noun phrases, in which position it may be loosely described as a genitive case marker.

This "genitive" postposition fills a wide range of functions, one of them being the indication of possession. In this role it might seem to be in competition with the possessive pronouns, but actually this is not the case.

Instead there are hierarchically conditioned alignments between one or the other means of indicating possession and certain ranges of NP types, corresponding to differences in the naturalness (-markedness) of various NP types for serving as possessor. This possessor hierarchy is identical to Silverstein's "agent hierarchy" (Dixon 1976, p. 122), which is not surprising, considering the universally close connection between transitivity and possession (see, e.g., Allen 1964 and Watkins 1967).

NPs at the top of the hierarchy, the most natural possessors, show possession by means of possessive pronouns; NPs at the bottom by means of the genitive postposition. The closer the NP is to the top or the bottom of the hierarchy, the more thoroughly is this alignment maintained.

Thus, among the personal pronouns, which are the topmost NPs on the hierarchy, the genitive postposition does not occur at all. Possession is indicated only by the possessive pronouns (most of which are not formally identical to free standing pronoun + genitive postposition) and

the other functions of the genitive are filled out in other ways.

Personal names, which occupy an intermediate position on the hierarchy--below the personal pronouns, but above all other lexical nouns--are "intermediate" in their genitive-possessive case-marking as well. The genitive postposition does occur on them occasionally, but when it does, it seems never to serve a "possessive" function. (See p. 99 below for some functions it does serve on proper names.) That function is instead carried out by the possessive pronouns, which, however, often behave more like postpositions than free pronouns in such instances. That is, they occur after a full (possessor) noun phrase, together with the last (grammatical) word of which they form a single phonological word. (For grammatical vs. phonological word, see Dixon 1977, pp. 88-98.) The most heavily stressed syllable of the possessive pronoun receives secondary stress in relation to the primary stress of the preceding grammatical word, e.g.,

Dáŋal anàŋga

'his' sg.
'Daŋal's (wife)'

Gádbuŋu anàŋga dámbun

'his' sg. 'country'
'Gadbuŋu's country'

émi anàŋga Déd Bérel anàŋga

'what's it?' 'his' sg. 'Ted' 'Ferrel' 'his' sg.
'whose (cattle station)? Ted Ferrel's'

It is possible that this particular possessive pronoun, anàŋga, 'his' sg. obj., which is the least marked of the set, is in the process of being reinterpreted by Uŋarinjin speakers as a simple possessive

postposition, devoid of all number and gender specification. That this is so is suggested by examples such as the following:

njándu njáwan anaŋga báljа njumálu

'she' 'Njawan subsection' 'flee' 'she comes to here'
'She who belongs to Njawan subsection flees to here.'

The word njawan is of the feminine gender, so the following form would be njananga 'fem. sg. possessor-sg. possessed' if it were functioning as a free-standing possessive pronoun. That it is ananga suggests that the only information it is intended to convey here is the category "possessive."

To return now to the hierarchical split in ways of indicating possession, it is interesting to note that some NPs which might seem hardly to be personal names nonetheless behave like them in "death taboo" situations.

For example:

ded boy ananga mayara

'dead' 'man' 'his' sg. 'house'
'The dead man's house'

The man referred to here was a deceased non-Aboriginal (which is perhaps the reason for the English expression "dead boy") whose identity was clear from the linguistic context, but whose name the speaker was avoiding in keeping with the "death taboo" (see sec. 4.4). Nonetheless, the seemingly vague expression "dead boy," its unique reference being clear, is treated as a "personal name" insofar as it takes ananga instead of -nanga.

Below personal names on the hierarchy, all NP types show possession by means of the genitive postposition.

This is true even of words for human beings when their reference is not definite, e.g.,

brṛu - ŋaŋga djuwunba

'Aboriginals' gen. 'corroboree depicting a traditional story'

'The Aboriginals' Djunba corroboree'

modaga bolidjman - ŋaŋga

'motor car' 'policeman' gen.

'A policeman's motorcar'

The same is true of non-human animals:

geren dila - ŋaŋga

'pillow' 'dog' gen.

'A dog's pillow'

yali - ŋaŋga diŋgal

'kangaroo' gen. 'radius' (bone)

'A kangaroo's radius'

It is also true of inanimate NP's insofar as they every function as "possessor":

baŋaṛan - ŋaŋga modaga

'name of a leprosarium' gen. 'motor car'

'Baŋaṛan's motorcar'

biliboŋ - ŋaŋga amalguni

'billabong' gen. 'louse'

'The louse from the billabong'

Note that this split among possessor NPs has nothing to do with the grammatical category of gender. Nouns of any gender or number can show possession in either of these two ways, depending on other factors. Nor is even a strictly "semantic" classification adequate. Rather the

split is conditioned directly by cultural rules governing the referential function of language (cf. sec. 4.4 and 4.5).

The indication of possession is, as I have already remarked, not the only use of the genitive postposition.

Sometimes it serves a local function, in which case it is the ablative-elative counterpart to lative -y_1u. That is, it means something like: 'motion away from, or originating at', e.g.,

durgunduma - ŋaŋga baṛi ŋadi njuŋguludma - y_1u

(place name) gen. 'go up' 'we do' (place name) lat.
'We go up from Durgunduma to Njuŋguludma'

gaġṛid - ŋaŋga waraydj ŋundumaŋalu

'Damon Station' gen. 'bring back' 'they brought me'
'They brought me back from Damon Station'

Although -ŋaŋga never occurs as a possessive marker on personal names, it does occur on them with this local meaning, e.g.,

Djabman - ŋaŋga maḍu ma - ŋari malŋana mindi

'Chapman' gen. 'go' 'it goes'- rel. 'creek' 'it'
'The creek that goes from Chapman's place'

Then there are uses of -ŋaŋga which could be described as "partitive," e.g.,

bleng - ŋaŋga aŋuŋuḷuninja

'flank steak' gen. 'I gave to him'
I gave him some of the flank steak'

-ŋaŋga is regularly used with time expressions to mean 'belonging to or associated with (that time)', e.g.,

duḷ birumaṛa wundir - ŋaŋga biri

'stomp' 'they did' 'olden days' gen. 'they'
'Those of olden days used to stomp'

ŋala djiri galumun - naŋga

'animal' 'he' 'long ago' gen.
'A beast of long ago'

Genitive -naŋga deviates from its usual temporal sense when it occurs on the word di, 'that, then'. The suffixed form di-nanga (often pronounced [dínènge]) means, not 'associated with that' but 'after that', a meaning which is closer to the elative-ablative use of -naŋga than the possessive use which is the basis for its usual temporal meaning.

Finally, there are quasi-derivational uses of -naŋga, where it means something like 'concerned with', often subject to various idiomatic specializations in sense (as in the second example below).

For example:

barudu - naŋga

'bush war' gen.
'one concerned with, or a veteran of, the bush wars'

ŋabun - naŋga djiri

'(alcoholic) gen. 'he'
beverage'
'possessed by alcohol', i.e.,'a drunkard'

2.1.5.4.3.7. Instrumental. The instrumental postposition is -njine ∿ njineŋga. I have been unable to discover any dialectal, phonological, or semantic basis for the alternation between these two allomorphs, and so must tentatively regard it as a matter of free variation.

This postposition occurs only on "inanimate" NPs and always means 'by means of'.

For example:

yinda - njine wundidj ŋandilaniri

'spear' inst. 'assault' 'the two did to me'
'Those two assaulted me with spears'

dinda bumaṛa onmal - njineŋga

'paint' 'do to me' 'pipe clay' inst.
'Paint me with pipe clay'

2.1.5.4.3.8. Comitative. The comitative postposition is -gude. It appears on all types of NPs, including personal pronouns, and means 'including', 'accompanied by' or 'having' (n.b.: Uŋarinjin has no verb 'have').

For example:

yowada djilimindi - gude maṛa oni

'horse' 'horse shoe' com. 'see' 'he did'
'He saw a horse with horseshoes on'

wana biyalu me - gude

'when' 'they come here' 'vegetable food' com.
'When they come here with vegetable food'

bedja njaŋgalu wadi - gude

'then' 'we came' (man's name) com.
'Then we came with Wati'

ada ŋima njaŋan - gude

'sit' 'I will do' 2 sg. com.
'I'll sit down with you'

2.1.5.4.3.9. Vocative. The "vocative" postposition is -ay, which carries a heavier stress than the word it occurs on. It is usually used on human relationship terms and personal names.

For example:

gundi - ay

'husband' voc.
'Hey husband!'

Mówaldjiyali - ăy

(man's name) voc.
'Hey Mowaldjiyali!'

But it can also be used on other kinds of NPs as a way of making a strong request. For instance, while sitting with some Ngarinjin men around an earth oven from which a freshly cooked kangaroo had just been lifted, I heard one man yell: 'rà̀ngu - ăy!', meaning, 'I've got dibs on the heart!'

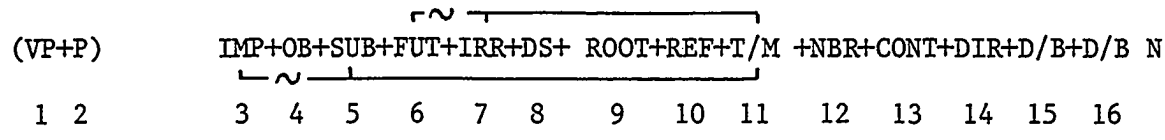
This "vocative" postposition is also frequently used in utterances which are shouted over long distances, in which cases it often seems not to be in constituency with a single phrase or even a single clause or sentence, but rather with the whole utterance, carrying the sense 'Listen to this!'

2.2. The Verb

Unarinjin verbs are of two kinds: simple and compound. A simple verb consists of a single finite-verbal word (the internal structure of which is often far from simple, as we shall see). For examples see sec. 2.2.13. A compound verb consists of one such finite verbal word, preceded by another, non-finite verbal word (which I call the "verbal particle"). Examples occur in most of the Unarinjin sentences which have so far been presented.

The morphology of the finite verbal word is the same whether it stands by itself as a simple verb or goes together with a verbal particle to comprise a compound verb (in which case we will refer to the finite verbal word as the "auxiliary" verb).

Thus it is possible to give a single schematic representation which will provide an overview of the structure of order-classes for both the simple and compound verb. This is given in figure 3.



The abbreviations are to be read as follows:

VP	verbal particle	REF	reflexive/reciprocal suffix
A	particle aspect suffix	TM	tense/mode suffix
IMP	imperative prefix	NBR	dual/paucal number suffix
OB	object pronominal prefix	CONT	continuative aspect suffix
SUB	subject pronominal prefix	DIR	directional suffix
FUT	future prefix	D/B	dative-benefactive suffix
IRR	irrealis prefix	D/B N	dative benefactive number suffix
DS	definite subject prefix		

Fig. 3. Order classes of the Unarinjin verb

The connecting lines and complementary distribution signs above and below the abbreviations are meant to indicate that when position 3 is occupied by a non-zero element, no non-zero element can occur at position 5, 6, or 11, and that the same is true of position 6 with respect to 7 and 11.

Table 20 shows the grammatical categories which are expressed in the verb, and matches them to the order classes in which they are expressed. The numbers in the "order class" column correspond to those given in figure 3. In the third column are numbers of the pages on which one may find a discussion of the form classes associated with each of these grammatical category/order-class combinations. The reason the form classes are indexed by category/class combination rather than just by category or by class is

TABLE 20

GRAMMATICAL CATEGORIES IMPLEMENTED
IN THE UNARINJIN VERB

Grammatical Category	Order Class	Page
Tense		
Present (in indicative mode only)	11	107–10
Future (in indicative mode only)	[6, 11]	116–19
	[7, 11]	118–19
Past (in indicative and irrealis modes)	11	107–10, 120, 126
Non Past (in irrealis mode only)	11, (7)	120
Aspect		
Continuative	13	143–45
Punctual	2	159
Iterative	2	157
Iterative Continuative	[2, 13]	159
Unmarked	[2, 13]	143
Mode		
Indicative	[7, 11]	107–10
	(4)	113–15
	(5)	110–15
Optative	[7, 11], (4), (5)	126–30

TABLE 20--Continued

Grammatical Category	Order Class	Page
Irrealis	7 (4) (5)	119-26
	(11)	107-10, 120, 126
Imperative	3	128-33
	(4)	130-33
	(11)	131
Person		
Of subject	5	110-15, 119-26
Of object	4	
Of dative-benefactive constituent	15	148-50
Number		
Singular vs. Non-singular		
Of subject	5	110-15, 119-26
Of object	4	
Of dative-benefactive constituent	15	148-50
Dual vs. Paucal (within non-singular)		
Of subject or object (see p. 141-2 for conditioning)	12	141-43
Of dative-benefactive constituent	16	149
Gender		
Of subject (of intransitive verb only)	5	111-13
Of object	4	119-23

TABLE 20--Continued

Grammatical Category	Order Class	Page
Voice		
Transitive vs. Intransitive	[9] [11]	107-10
	(4) (5)	110-15
Active vs. Relexive/Reciprocal	10	135-39
	(11)	109
Direction of Motion Relative to Speaker		
Proximad vs. Distad vs. Unspecified	14	145-48
Coreference Status of Subject		
Definite vs. Unspecified	8	139-41

that multiple form- and order-classes sometimes express the same category (e.g., irrealis mode) and, on the other hand, two alternating categories are sometimes expressed within a single form class (e.g., at position #11).

Some of the categories are expressed only by the simultaneous presence of certain formal features within more than one order class. The optative mode, for instance, is signalled by a zero in position 7 combined with the presence of an otherwise irrealis past morpheme in position 11. Neither of these features by itself signals optative mode; indeed each of them by itself is usually associated with a non-optative mode. But the combination of the two at once does uniquely signal "optative." "Synergetic" relationships of this kind are indicated on the table by rectangular brackets around the form classes in column 2 which

go together in this way to mark the corresponding category indicated in column 1.

In other cases, some category which is uniquely signalled within one form class, or combination of form classes (as above) is sometimes also redundantly marked within other form classes as well. Irrealis mode, for instance, is always signalled by the presence of an irrealis morpheme in position 7. Depending on tense and person/number, certain features associated with position 11, and 4 and 5 respectively may, redundantly, signal irrealis mode as well. Position 7 in this case is clearly the primary locus of irrealis marking, and positions 4, 5, and 11 the secondary loci for the signalling of this category. "Secondary" associations of this kind are indicated on the table by parentheses around the form classes in column 2 which bear this kind of relationship to the categories with which they are matched in column 1.

In the following section I deal sequentially with the form classes associated with each of the order class positions in figure 3 (p. 103), and to some extent, with their grammatical functions. (More on these may be found in chapters 3 and 4 below.)

2.2.1. Order Classes 9 and 11: Roots and Their Conjugation Classes

The phonological shape of the verb root is governed by the same restrictions which apply to the word (pp. 23-26), plus one more restriction: no verb root begins in a stop consonant.

The number of distinct roots in the lexicon of Unarinjin is fairly large (somewhere between 1,000 and 10,000, I would guess) but most of them are textually very infrequent. By far the majority of Unarinjin verbs both by text count and by dictionary count, are of the "compound" type, consisting of non-finite verbal word + finite "auxiliary" verb as in the

full form represented by figure 3. The set of roots on which all compound verbs are based (i.e., those whose inflected forms can serve as auxiliary verbs), is closed and quite small, numbering fourteen. Of these fourteen, all but two, $\sqrt{w_1 u}$ and $\sqrt{y_1 inde_1}$ (see table 21, p.109) sometimes also occur in isolation as "simple verbs."

Thus the entire set of roots may be broken down as follows:

Used exclusively in compound verbs: 2

Used both as simple verbs in compounds: 12

Used exclusively as simple verbs: several thousand

Each of these roots occurs only with certain allomorphs of each of the three tense-mode morphemes associated with position 11, i.e., those which mark:

1. present indicative
2. past indicative
3. past irrealis ∿ optative (as per sec. 2.2.5)

Depending on which allomorphs they occur with, the roots may be seen as belonging to seven different "conjugation" classes, as laid out below in table 21. The roots given on this table are those which belong to the first two of the three categories mentioned above, i.e., those whose conjugated forms can or must serve as auxiliary verbs. This is sufficient to characterize the occurring allomorphy among all roots, including the many which do not function as auxiliaries, because each of them seems to belong to one of the same classes which are found among the auxiliary roots.

TABLE 21

ROOT CONJUGATION CLASSES

Class	Auxiliary		Present Indicative Suffix	Past Indicative Suffix	Optative Past Irrealis Suffix
1	√w$_1$u	'act on'	-n	-ni	-yi
	√y$_1$ibu	'throw'	"	"	"
	√y$_1$ila	'hold'	"	"	"
	√minda	'take', or 'bring' (depending on directional suffix)	"	"	"
	√mindjala[1]	'wait for'	"	"	"
	√ŋulu[2]	'give to'	"	"	"
	√iniŋa[3]	'put'	"	"	"
	√w$_1$a	'fall'	"	"	"
2	√ma	(intransitive) 'do'	-Ø	-ra	-y$_1$i
3	√a	(intransitive) 'come' or 'go' (depending on directional suffix)	-Ø	-ŋga	-ŋi
4	√y$_2$i	'be'	-Ø	-nji	-ŋi
5	√ma(ra)[4]	(transitive) 'take' or 'bring' (depending on directional suffix)	-n	-ŋa	-y$_1$i
6	√(r)a	(transitive) 'go to' or 'come to'	-n	-ni	-y$_1$i
7	√y$_1$inde[5] and all reflexive-reciprocal verbs	'fall'	-n	-ŋga	-ŋi

[1]This verb occurs in isolation as a simple verb far more often than as an auxiliary verb. In the latter capacity it occurs, as far as

I know, with only one verbal particle, ada, 'to sit', the compound verb phrase meaning 'to sit waiting for'.

[2]This verb is usually conjugated as a class 1 verb, but one occasionally hears an alternate past indicative form: -ŋulaŋara, the tense suffix of which seems to be a compounding of the class 5 and class 2 past indicative allomorphs. Given what we know about the way analogy usually works (Kurylowicz 1966, pp. 158ff.), it is likely that this verb previously belonged to one of those classes (or perhaps another, now-extinct class) and has only recently been transferred to class 1.

[3]This verb has probably only recently been transferred to class 1. Occasionally the past indicative form -iniŋara is heard, suggesting a class 2 origin. It may even be that the -ŋa- of this root is by origin a class 5 tense marker which has been reinterpreted as part of the root, or that there was another -ŋara class, to which √-ŋulu may also have belonged.

[4]This root appears as √ma in the indicative mode and as √mara in all the other modes. In morphophonemic transcription, I always write it as √ma(ra) so as to insure that it will not be confused with the root √ma, which is rather remote from this root in meaning, syntax (being intransitive as opposed to transitive √ma(ra)), and morphology (belonging to, or rather comprising, a different conjugation class).

[5]This root never occurs as a simple verb, so it is difficult to isolate its meaning. For those verbal particles which may occur either with this auxiliary or with √w_1a, the √$y_1$inde phrase carries a sense of the 'falling' action being clumsier and/or less controlled. Where the subject of the √$y_1$inde phrase is non-singular (as it usually is) there is a reflexive-reciprocal sense of 'falling together'. Indeed, this root may be characterized formally as inherently reflexive-reciprocal, its morphology being identical to that which would result from the reflexivization of a root √$y_1$inda. But no such root exists in present-day Uŋarinjin.

2.2.2. Order Classes 4 and 5: Pronominal Prefixes

Every Uŋarinjin verb is rigidly specified as either transitive or intransitive. Intransitive roots take one pronominal prefix which cross-references a subject noun phrase; transitive roots take two, the first of which cross-references an object (patient) NP and the second of which cross-references a subject (agent) NP. The transitive object and subject prefixes are of class 4 and 5 respectively. Since only one of these two positions is ever filled when the root is intransitive, the order class for intransitive subject pronominal prefixes might

conceivably be labelled class 4, were it not for the fact that the transitive "agent" adjunct is the one which is identified with intransitive "subject" for purposes of "definite subject" marking, as per sec. 2.2.8. But that evidence justifies calling it class 5. (Cf. Rumsey forthcoming, pp. 29-33.)

The transitive-intransitive split is partly consistent with the system of conjugation classes (see sec. 2.2.1), and partly inconsistent with it. Among the auxiliary roots on Table 21, for instance, all class 1 roots except $\sqrt{w_1 a}$ and all roots of classes 2, 3, 4, and 7 are transitive, and all roots of other classes, along with $\sqrt{w_1 a}$ from class 1 are intransitive.

Among both the transitive and the intransitive subject prefixes, the forms of some of the pronominal prefixes are somewhat different for indicative vs. irrealis mode.

2.2.2.1. Indicative Intransitive

The indicative intransitive subject prefixes, which closely resemble some which we have already seen (sec. 2.1.5.2.1), are shown in table 22.

TABLE 22

INTRANSITIVE INDICATIVE VERB PREFIXES

1.	sg.	ŋa$_1$-	1 pl. incl.	ŋar-
2.	sg.	njin-	1 pl. excl.	njar-
3.	sg. masc.	a$_1$-	2 pl.	gur-
	sg. fem.	nja$_2$-	3 pl.	bur-
	w-class	w$_1$u-		
	m-class	ma$_2$-		

As per sec. 1.2.4.2, both $-a_1$ and $-a_2$ merge with a following -yi to give e, e.g.,

/ɲa$_1$ + $\sqrt{y_2 i}$ / → ɲe ,
1 sg. 'be' 'I am'

/ɲarwa a$_1$ + $\sqrt{y_1 inde}$ + n / → ɲarwa enden
'fall' 3 sg. masc. 'fall' pres. 'he falls'

/djoy ma + $\sqrt{y_2 i}$ / → djoy me
'great' m-class 'is great'

/mindjal nja$_2$ + $\sqrt{y_2 i}$ / → mindjal nje
'eat' fem. 'she eats'

The final -r of all the non-singular prefixes strengthens to d before the m of $\sqrt{ma}$, e.g.,

/ɲar + $\sqrt{ma}$ / → ɲadma
1 pl. ex. 'do' 'we do'

/ bur + $\sqrt{ma}$ / → budma
1 pl. 'do'

Before the root $\sqrt{a}$, the final r of all the non-singular prefixes changes to y, e.g.,

/njar + $\sqrt{a}$ / → njaya
1 pl. ex. 'go' 'we go'

/bur + $\sqrt{a}$ / buya
3 pl. 'go' 'they go'

I have no regular phonological explanation for this change, and so must regard the -y prefixes as root-specific allomorphs.

2.2.2.2. Indicative Transitive

Transitive verbs take a subject pronominal prefix in position 5 and an object pronominal prefix in position 4. For some of the resulting object-prefix-subject prefix sequences, it is not obvious where to make the "cut" between the two elements. Since my segmentation is not the only conceivable one, I shall present an unalayzed set of object element + subject element pairs first, when introducing both the indicative and the irrealis prefixes.

The set of indicative pairs is given in table 23. Almost all of these compound prefixes are clearly segmentable into sequences of discrete object + subject elements. (The only ones for which this may be doubted are the 1 sg. obj.-2 sg. sub. compound djan-, and the 3 pl. obj.-3 sg. sub. compound $anda_2$-, but comparison with elements elsewhere in the morphology[1] suggests that these compounds have zero-form object and subject markers respectively.) But such a segmentation requires one to set up, for certain person/number categories, allomorphs, the choice among which depends on what other elements they are paired with. In other words the system is a partly "global" one, of the kind discussed in Silverstein 1976 (pp. 134ff.).

These subject and object elements are given in table 24. The r of plural subject allomorph /ra_2/ always emerges phonetically as d, and so could be written as underlying /d/, but I prefer to write it as /r/

[1] For djan-, cf. the 2 sg. sub. allomorph dja_2 given in table 24. For $anda_2$-, cf. the plural imperative object marker -$anda_2$- (sec. 2.2.6.1).

TABLE 23

TRANSITIVE INDICATIVE VERB PREFIXES

Subject	Object									
	1 sg.	2 sg.	Masc.	Fem.	w-class	m-class	1 Pl. Inc.	1 Pl. Ex.	2 Pl.	3 Pl.
1 sg.		njun-	aŋa$_2$-	njuŋa$_2$-	wuŋa$_2$-	muŋa$_2$-			gunda$_2$-	buŋa$_2$-
2 sg.	djan-		anjdja$_2$	njinjdja$_2$-	winjdja$_2$-	minjdja$_2$-		njada$_2$-		binjdja$_2$-
3 sg.	ŋan-	njun-	a$_1$-	nja$_2$	wu-	ma$_2$-	ŋada$_2$-	njada$_2$-	gunda$_2$-	anda$_2$-
1 Pl. Inc.			ar-	njar-	war-	mar-				bar-
1 Pl. Ex.		njinda$_2$-	anjir-	njanjir-	wanjir-	manjir-			gunda$_2$-	banjir-
2 Pl.	ŋanda$_2$-		ina$_2$-	njuna$_2$-	wuna$_2$-	muna$_2$-		njada$_2$-		buna$_2$-
3 Pl.	ŋanda$_2$-	njinda -	ir-	njir-	wur-	mur-	ŋada$_2$-	njada$_2$-	gunda$_2$-	bunda$_2$-

TABLE 24

TRANSITIVE INDICATIVE SUBJECT AND OBJECT PRONOMINAL PREFIXES

	Object	Subject
1 sg.	ɲan ∿ Ø	ɲa$_2$ ∿ Ø
2 sg.	njin ∿ njun	djan ∿ dja$_2$ ∿ Ø
3 sg. masc.	a$_1$ ∿ i ∿ an	Ø
3 sg. fem.	nja$_2$ ∿ nju ∿ nji ∿ njin	Ø
" w-class	wa$_2$ ∿ wu ∿ wi ∿ win	Ø
" m-class	ma$_2$ ∿ wu ∿ wi ∿ min	Ø
1 pl. inc.	ɲada$_2$	ar
1 pl. ex.	njada$_2$	Ø ∿ anjir ∿ ra$_2$
2 pl.	gunda$_2$	Ø ∿ ɲa$_2$ ∿ ra$_2$
3 pl.	bu ∿ bi ∿ bin ∿ anda	Ø ∿ r ∿ ra$_2$

(→ d / n_) so that it may be identified with the non-singular marker r which occurs elsewhere in the morphology (cf., e.g., sec. 2.1.5.2.2).

The n of the third person object allomorphs an, njin, win, min and bin, which is always followed by the -dj of 2 sg. subject marker -dja$_2$, assimilates to nj, as per sec. 1.2.3.2. It is identifiable as underlying /n/ by the quality of the preceding /i/ in the 3 sg. object elements, which is pronounced [I] (as per sec. 1.1.2.3.1.2 above).

a$_2$ (but not a$_1$) regularly assimilates in gravity to the first consonant of a following root, as exemplified in sec. 1.2.4.1. Both a$_1$ and a$_2$ coalesce with following -y$_1$i or -w$_1$u to yield mid-vowels, as exemplified in sec. 1.2.4.2. Prefix-final vowels are dropped when a following root begins in a vowel, as seen in sec. 1.2.4.3.

2.2.3. Order Classes 6 and 11: Future Tense

Ŋarinjin has a grammatical category which has been referred to in the literature (Coate and Oates 1970, p. 47) as the "future tense." As in many languages, this "future" is not a tense category pure and simple. Rather, as we shall see below (sec. 3.3.1.3), it combines "tense," to a certain extent, with intentional modality, the signalling of which may even be its primary function.

This "future" category is marked, for roots of all conjugation classes, by a zero element in position 11, combined with the presence of a "future" morpheme in position 6.

The future morpheme has three allomorphs: <u>iy</u>, <u>iya</u>$_2$, and <u>a</u>$_2$.

The <u>iy</u> allomorph occurs before the root √a, and before all other intransitive roots just in case their pronominal prefix ends in a vowel. Just as prefix-final vowels are dropped when the following root begins a vowel, so they are dropped when -iy intervenes between prefix and root. Examples of future verb forms with the -iy allomorph are:

/ŋa$_1$ - iy - √a /	→	ŋiya	
1 sg. fut. 'go'		'I will go' or 'I want to go'	

/ada nja$_2$ - iy - √ma /	→	ada njiyma	
'sit' fem. fut. 'do'		'she will sit'	

/ŋarwa ma$_2$ - iy - √wa/	→	ŋarwa miywa	
'fall' m-class fut. 'go'		'it will fall'	

/ŋar - iy - √a /	→	ŋariya	
1 pl. inc. fut. 'go'		'Let's go!'	

Before a transitive root beginning with glide + homorganic vowel,

(i.e., $\sqrt{w_1u}$, $\sqrt{y_1ila}$, etc.) paired with any vowel-final prefix combination except one ending in the 1st sg. or 2nd sg. subject allomorph $-ŋa_2-$, dja_2- respectively, the future allomorph is $-iya_2-$. As before -iy-, prefix final vowels are dropped before $-iya_2-$. The a_2 of $-iya_2-$ coalesces with following $-y_1i-$ or w_1u- as per sec. 1.2.4.3. Examples of future verb forms with the $-iya_2-$ allomorph are:

/mara gunda - iya - $\sqrt{w_1u}$ / → mara gundiyo
'see' pl. ob. fut. 'act on' 'They will see you'

/wula a_1 - iya_2 - $\sqrt{w_1u}$ / → wula iyo
'talk' masc. ob. 3 sg. sub. fut. 'act on' 'He will speak to him'

/li $ŋanda_2$ - iya_2 - $\sqrt{y_1ila}$ → li ŋandiyela
'watch' 1 sg. ob. pl. sub. fut. 'hold' 'They will watch me'

/$buna_2$ - iya_2 - $\sqrt{y_1ila}$ / → buniyela
3 pl. ob. 2 pl. sub. fut. 'hold' 'You (pl.) will hold them'

/$anda_2$ - iya_2 - $\sqrt{yibu}$ / → andiyebu
3 pl. ob. 3 sg. sub. fut. 'throw' 'He will throw them'

The "elsewhere" allomorph of the future morpheme, the one found in all environments not included above, is $-a_2-$. As expected, any prefix-final vowel is dropped before this a_2 (which almost never has any phonetic consequences, since the prefix-final vowel for every prefix combination except masc. -3 sg. is a_2, which merely gets replaced by this other a_2.) This a_2 is dropped before root-initial vowels, and undergoes "a_2 assimilation" (sec. 1.2.4.1) before root-initial consonants. Examples of future verb forms showing the $-a_2-$ allomorph are:

/ɲar - a_2 - $\sqrt{ma}$ / → ɲaruma

1 pl. inc. fut. 'do' 'We will do' or 'Let's do'

/njin - a_2 - $\sqrt{w_1a}$ / → njinuwa

2 sg. fut. 'fall' 'You will fall'

/mara anɟa_2 - a_2 - $\sqrt{w_1u}$ / → mara on

'see' masc. 1 sg. fut. 'act on' 'he will see him'

/djan - a_2 - $\sqrt{ɲulu}$ / → djanuɲulu

1 sg. ob. 2 sg. fut. 'give to' 'You will give to me'

/li ɲan - a_2 - $\sqrt{y_1ila}$ / → li ɲanela

'watch' 1 sg. ob. 3 sg. sub. fut. 'hold' 'He will watch me'

/njun - a_2 - $\sqrt{ma(ṛa)}$ / → njunuma

2 sg. ob. 3 or 1 sg. sub. + fut. 'take' 'He (or I) will take you'

/gunin - binjdja - a_2 - $\sqrt{iniɲa}$ / → gunin binjdjiniɲa

'cover' 3 pl. ob. 2 sg. sub. fut. 'put' 'You will cover it'

Note that, for transitive verb roots beginning in consonants (except w_1u- and y_1i- roots), such as $\sqrt{ɲulu}$ and $\sqrt{ma(ṛa)}$ above, <u>prefixes + future allomorph + root</u> is formally indistinguishable from <u>prefixes + root</u> when the prefix combination ends in a_2, since this a_2 is just "replaced" by the future allomorph. When the prefix combination ends in a consonant, "future" forms are distinguished by the presence of a following assimilating vowel, as in the examples above. When the root begins in a vowel, however, <u>prefixes + future a_2 + root</u> is never formally distinguishable from <u>prefixes + root</u>, because the future -a_2- allomorph is always replaced by the root-initial vowel. Nonetheless, for all these

kinds of transitive roots, when one considers the conjugated verb form as a whole, "future" is always formally distinct, whether or not it is unambiguously marked in position 6. This is true because for all transitive verbs (and transitive forms are the only ones on which the future allomorph is sometimes phonetically unrealized), "present indicative" is always marked by a non-zero post-root element n ∿ n̤. "Future," then, is always identifiable by the absence of any positive marking in position 11, combined with the absence of irrealis marking in position 7.

2.2.4. Order Classes 5 and 7: Irrealis Mode

One of the non-indicative verb modes in Unarinjin is one which, in the literature on the Kimberley languages, has been called "irrealis," a name which I shall retain here, less for its accuracy than in the interest of terminological standardization.

The basic meaning of this mode, which is subject to further specification by the various mode particles (sec. 3.3.1.4) is that the proposition of which the irrealis verb expresses the predicate is one which, in the speakers' estimation, may not be true.

As we shall see below (sec. 3.3.1.4) each "mode particle" occurs only with verbs of some specified mode(s). One such mode particle is wa, 'not', which, as one should expect from the previous paragraph, occurs only with verbs in the irrealis mode. I mention it here both because it will be relevant in the analysis of the irrealis morphology below, and because I shall use it in all the following examples of irrealis verb forms (it being very difficult to gloss any non-contextualized "irrealis" verb form not accompanied by some mode particle).

2.2.4.1. Irrealis Intransitive

The prefixal elements for intransitive irrealis verbs are listed in table 25.

TABLE 25

INTRANSITIVE IRREALIS VERB PREFIXES

1 sg.	ŋanga$_2$-	1 pl. inc.	ŋarga$_2$-
2 sg.	njinga$_2$-	1 pl. ex.	njarga$_2$-
3 sg. masc.	aŋga$_2$-	2 pl.	gurga$_2$-
3 sg. fem.	njaŋga$_2$-	3 pl.	burga$_2$-
w-class	waŋga$_2$-		
m-class	maŋga$_2$-		

As usual, the a_2 which occurs on all these prefixes assimilates to following consonants, coalesces with following glide + homorganic vowel, and is lost before a following vowel. These processes need not be exemplified again here.

There are no separate "future" forms which take these irrealis prefixes. The future forms which occur with otherwise "indicative" prefixes are, it might be argued, semantically closer to this irrealis mode than to the indicative mode, since the "future" is, ipso facto, unrealized.

There is, on the other hand, a separate past tense in the irrealis mode, which is marked by y_1i or ŋi depending on conjugation class as indicated in table 21 (p. 109). When the -y_1i allomorph follows a root ending in a, the sequence yields e as usual, e.g.,

wa	wuḷa	/ŋanga$_2$ - √ma - y_1i /	→	ŋangume
'not'	'talk'	1 sg. irr. 'do'		irr. past

wa	ŋarwa	/aŋga$_2$ - √w$_1$a - y_1i/	→	aŋguwe
'not'	'fall'	masc. irr. 'fall'		irr. past

Thus far I have been treating these irrealis verb prefixes as if

they were unitary "portmanteau morphemes," each signalling the grammatical category "irrealis" plus person and number information in a single, unanalyzable bundle. Especially for the intransitive series introduced above, it is quite evident that this is not the case. All of them end in $-ga_2-$, and for all except 3 sg., the phonological substance that precedes this $-ga_2$ is identical to the corresponding indicative intransitive verb prefix (see sec. 2.2.2.1). This element $-ga_2-$, then, could be isolated as the irrealis marker. Then one need not posit any distinct irrealis intransitive pronominal prefixes except for 3 sg., which could either be aŋ-, njaŋ-, waŋ-, and maŋ-; or alternatively a_1- (same as indicative), nja_1-, wa_1-, ma_1-, with special 3 sg. irrealis allomorph (or 2nd degree strengthened form) $-ŋga_2$.

But note that the form of the irrealis marker could just as well be $-w_2a_2-$, since, among intransitive verbs, it always follows a nasal or -r-, in which positions w_2 is strengthened to g (sec. 1.2.2.1).

That $-w_2a_2-$, not $-ga_2$, is the correct underlying form of the irrealis marker is, indeed, the position I will adopt here. The best evidence for doing so comes from the form of the transitive irrealis prefixes, and so must wait until they are introduced below, but there is another argument which can be given here.

The $-w_2a_2-$ morpheme is by origin, I submit, identical to the negative mode particle wa, and dates from a time when the pronominal elements preceding the verb root were less closely bound to it than they are now. Just as mode particles in present-day Unarinjin come just before the inflected verb, or non-finite verbal particle (if there is one), they could earlier have come just before a verb form which was inflected only for tense, as yet showing no person/number agreement by fused pronominal elements. The particle wa, then as now, meant 'not', so that the present

irrealis verb developed from an originally negative verb phrase. Even now, irrealis forms without any accompanying mode particle are occasionally used with a purely negative meaning, but usually this sense requires a "reinforcing" free-form negative particle wa.

If $-w_2a_2-$ comes from # wa #, then the w- of the latter must be w_2, not w_1 (i.e., must alternate with g, not b).

That this is indeed the case is suggested by two kinds of independent evidence.

First, there is another, negative/interrogative element -ga, (treated below, sec. 2.6.4.3) which, one strongly suspects, is nothing but a postpositional variant of # wa #.

Second, there is evidence that the w of # wa # is actually the w of w-class pronominal prefix wu-, which alternates with g rather than b (cf., for example, the w-class demonstrative ganda, etc. of sec. 2.1.2.2). This identification is suggested by the fact that, for many speakers, the negative mode particle (or at least an alternate, functionally identical form of it) is not wa, but way, which is the w-class-prefixed form of an adjective root $\sqrt{\text{ay}}$, which means 'no(ne)'. The w-class form, then, means 'none of that thing of the w-class'. The w-class 'thing' intended when way is used in this way is, as any Unarinjin speaker will tell you, that wulan, a w-class word meaning 'speech, word, words, or language' (see sec. 3.3.1.1.1 below).

But this second piece of evidence is somewhat equivocal. It may well be that the mode particle wa and the prefixed form way were originally quite distinct, but that their close similarity in form and meaning has led to their being identified in the minds of Unarinjin speakers to the extent that the latter has become substitutable for the former (but not

vice versa, since way is still a part of a "live" paradigm of √ay forms).

In support of my assertion that $-w_2a_2-$, not $-ga_2$ is the correct underlying form of the irrealis marker, I have claimed that that marker is by origin identical to the negative mode-particle # wa #. In support of that claim, I presented two arguments that the w of # wa # is w_2, not w_1. But even if it were positively established that # wa # is by origin identical to the irrealis marker, this would not by itself prove that the underlying form of the latter in a synchronic account must be $-w_2a_2-$ rather than $-ga_2-$: morphophonemics does not, in principle, recapitulate diachrony, even if it does usually turn out that way in practice. Rather, I see this historical argument as providing ancillary support for the synchronic one presented in the next section.

2.2.4.2. Irrealis Transitive

I need not burden the reader with another full chart of transitive verb prefixes for the irrealis mode, for, with but few exceptions, they may be derived from the corresponding indicative prefixes (see table 17, p. 77) by the application of two simple morphological rules.

First, the exceptions. When the object is third person and the subject is 1 sg., 3 sg. (except with 3 pl. object), or 2 pl., the (unexpected) irrealis prefix combinations are as shown in table 26.

Obviously these prefix combinations by themselves fit into a perfectly regular aggultinative paradigm. But some of its features, though regular, differ from those of the corresponding indicative forms. In particular, the 1 sg. indicative subject allomorph $-ŋa_2$ is replaced here by $-aŋ-$, and the 3 sg. subject allomorph Ø is replaced by -an- (or, if one prefers, -a- with 2nd degree strengthened irrealis allomorph $-ŋga_2-$). The 2 pl. subject allomorph $-na_2-$ is either replaced by

TABLE 26

"IRREGULAR" IRREALIS PREFIX COMBINATIONS

Object	Subject: 1 sg.	3 sg.	2 pl.
3 sg. masc.	$anga_2$-	$a\eta ga_2$-	$inu\eta ga_2$-
3 sg. fem.	$njanga_2$-	$nja\eta ga_2$-	$njunu\eta ga_2$-
w-class	$wanga_2$-	$wa\eta ga_2$-	$wunu\eta ga_2$-
m-class	$manga_2$-	$ma\eta ga_2$-	$mumu\eta ga_2$-
3 pl. (b-class)	$banga_2$-	(regular, i.e., anda -)	$bunu\eta ga_2$-

-nuŋ- (or -na_2ŋ-) or remains -na_2-, with the irrealis allomorph strengthened to -ŋga_2-.

Now the rules.

For all the person-number combinations not included in the chart of exceptions above, the irrealis prefix combination may be derived from the corresponding indicative one (for which, see sec. 2.2.2.2) as follows:

1) If the indicative prefix combination ends in a consonant (the occurring ones being n and r), add -ga_2-

2) If the indicative prefix combination ends in a_2, replace the a_2 by a non-assimilating [a·].

Some examples of resulting irrealis forms with various roots (see p. 109) are:

/njun + ga_2 + $\sqrt{\text{ŋuḷu}}$ / → njungunuḷu

2 sg. -{1 sg. / 3 sg.}

/djan + ga_2 + $\sqrt{ininja}$ / → djanginina

1 sg. - 2 sg.

/$nada_2$ + a· + $\sqrt{y_1ila}$ / → nadelan

1 pl. inc. - NP

/$anda_2$ + a· + $\sqrt{ma(ra)}$ / → anda·mara

3 pl. - 3 sg.

/$gunda_2$ + a· + $\sqrt{(r)\ a}$ / → gunda·ra

2 pl. - NP

/mar + ga_2 + $\sqrt{minda}$ / → marguminda

m-class - 1 pl. inc.

In my formulation of the second morphological rule above, and in the above examples, I have "mixed" descriptive levels: a_2 is a strictly morphophonemic unit, [a·] a more or less phonetic one, and the rest of the orthography in the examples is phonemic. What one needs in order to straighten out this confusion is the phonological apparatus developed in sec. 1.1.2.3. Recall that the conclusion reached there was that there were no instances of underlying long i or u (nor e nor o for that matter), but that all instances of phonetic [i·] and [u·] arise from underlying iyi and uwu respectively. Mostly on grounds of pattern congruity, it was then argued that all instances of phonetic [a·] might be derived from underlying /aw_2a /. To that argument from pattern congruity we may now add one based on morphological simplicity. That is, deriving [a·] from /aw_2a/ would allow us to replace the two morphological rules for irrealis marking given above with a single rule. Moreover that one morphological rule is simpler than either of the two it replaces because it need not

specify any environments conditioning the alternation of allomorphs. That is taken care of by the morphophonemic rules of consonant strengthening (sec. 1.2.2) which are needed elsewhere in the morphology anyway. The rule is:

To the indicative prefix combination, add /w_2a_2/.

As with all the intransitive irrealis prefixes, the w_2 of -w_2a_2- strengthens to g when following a consonant (see the first, second, and sixth example above). When -w_2a_2- follows a_2, which is the only vowel it ever follows, this $a_2w_2a_2$ sequence results in phonetic [a·] (for which, see the remaining examples above). Often in non-careful speech this [a·] is shortened to the length of a normal, stressed /a/.

All transitive roots, except when reflexivized, mark irrealis past tense with -yi, which also occurs with some intransitive roots (see sec. 2.2.4.1). The phonetic manifestation of this -yi after root-final -a has already been discussed (p. 120). When this -yi follows a root ending in -u, the /uyi/ sequence emerges as [i·], e.g.,

wa mara /ŋan - w_2a_2- $\sqrt{w_1u}$ - yi/ → ŋanguwi
'not' 'see' 1 sg. 3 sg. -irr. - 'act on' irr. past
'He didn't see me'

wa waydj /binjdja$_2$ - w_2a_2 - $\sqrt{yibu}$ - yi/ → binjdja·yibi
'not' 'send' 3 pl. 2 sg. - irr. 'throw' irr. past
'You didn't send them'

2.2.5. Order Classes 7 and 11: Optative Mode

There is a distinct "optative" form of the verb among both transitives and intransitives in all persons and numbers (and transitive pairs of them). Its morphology is very easy to describe, for it is nothing but a recombination of formatives used elsewhere.

Optative forms take "indicative" pronominal prefixes (see sec. 2.2.2), and the same suffix used to mark past tense on irrealis verbs (i.e., yi or ɲi depending on the conjugation class). The morphophonemics of <u>root</u> + <u>yi</u> are, of course, the same as I have described for -yi when used as an irrealis past tense marker (p. 120). Examples of optative verbs are:

linj /bar - $\sqrt{w_1 u}$ - yi/ → barwi

'watch' 3 pl. 1 pl. inc. -'act on' irr. past
'Let's watch them'

balja /ir - $\sqrt{(r)a}$ - yi/ → ide

'go to' masc. 3 pl. -'go go' -opt./irr. past
'Let them go to him'

billy can /wu - $\sqrt{a}$ (intr.) - ɲi - lu/ → waɲilu

w-class 'come' opt./irr. past- prox.
'Let the billy can come here' (a polite way of saying, 'Pass me the billy can')

minjdjal $/a_1$ - $\sqrt{y_2 i}$ - ɲi/ → eɲi

'eat' masc. 'be' opt./irr. past
'Let him eat'

In their treatment of Uŋarinjin morphology, Coate and Oates have conflated the paradigm of this optative mode with that of the imperative mode (treated below, sec. 2.2.6), listing imperative forms just where the subject is 2 sg. and optative forms for all other persons and numbers. This was an easy mistake to make, because the meanings of the two modes are quite similar (though their formal realization is not). Furthermore, there are no imperative forms with anything but (implicit) second person subjects (and, among transitives, third-person objects), so it is tempting

to "fill out" their paradigm with optatives for non-2 sg. subjects. What prevents us from doing so is the fact that optatives too occur with 2 sg. subjects, e.g.,

adaŋari yali bada /anjdja$_2$- $\sqrt{w_1u}$ - yi/ → anjdjuwi

'many' 'kangaroo' 'kill' masc. 2 sg. 'act on' opt./irr. past
'May you kill many kangaroo'

ŋarwa /njin - $\sqrt{w_1a}$ - yi/ → njinbi

2 sg. - 'fall' opt./irr. past
'May you fall'

ŋabun /njin - $\sqrt{ŋulu}$ - yi - ŋi/ → njinŋulinŋi

'water' 2 sg. 'give to' ref. opt./irr. past
'May you be given water'

2.2.5. Order Class 3: Imperative Mode

Intransitive imperative verbs for which the implicit subject (i.e., the addressee who is being "ordered") is singular take an imperative marker ba$_2$- in position 3. Because of the way ba$_2$- is used on transitive imperatives (see below, sec. 2.2.6.1), it cannot be regarded as a special imperative form of the 2 sg. subject morpheme, but must instead be thought of as one of the allomorphs of an imperative mood morpheme, ba$_2$ ∿ ∅, which in this case is followed by a zero subject marker for 2 sg.

Examples of intransitive 2 sg. imperatives are:

ada /ba$_2$ - $\sqrt{w_1a}$ / → buwa

'sit' imp. 'fall'
'sit down!'

awa /ba - $\sqrt{yi}$ / → be

'open' imp. 'be'
'Be open' (i.e., 'Open up and talk')

wula /ba_2 - $\sqrt{ma}$ / → buma

'talk' imp. 'do'
'Speak!'

/ba_2 - $\sqrt{a}$ - lu/ → balu

imp. 'go' prox.
'Come here!'

yudug /ba_2 - $\sqrt{yinde}$ / → bende

'bow down' imp. 'fall'
'Bow down!'

Intransitive imperative verbs for which the implicit semantic "subject" is plural are identical to the corresponding present indicative forms except that they do not bear a tense suffix. Since present indicative takes a zero suffix within conjugation classes 2, 3, and 4, 2 pl. imperatives of these classes are not formally distinguished in any way from the corresponding indicatives.

Examples of 2 pl. imperatives are:

wedj /gur - $\sqrt{w_1a}$ / → gurwa

'lie down' 2 pl. 'fall'
'You people lie down!'

bara bara /gur - $\sqrt{ma}$ - ndu / → gudmandu

'story' 2 pl. 'do' 3 pl. dat.
'You people tell them a story!'

madu /gur - $\sqrt{a}$ - ri - nja/ → guyarinja

'walk' 2 pl. 'go' du. dis.
'You two go away!' (for r → y, see pp. 112-13)

ganba /gur - $\sqrt{y_2i}$ - na / → gudina

'sing' 2 pl. 'be' pauc.
'You handful of people sing!'

bunbulwa /gur - $\sqrt{y_1 \text{ inde}}$ / → gudjinde

'persist' 2 pl. 'fall'
'You people keep it up!'

2.2.6.1. Transitive Verbs

Distinct imperative forms of the transitive verb exist only for combinations of second person (singular or plural) "subject" and third person (singular or plural) object.

When the (second person) imperative "subject" is singular, and the (third person) object is masculine, feminine, or b-class (plural), the verb takes the same initial imperative marker ba_2- which occurs with intransitive 2 sg. imperatives (sec. 2.2.6 above). This imperative morpheme is followed by an object marker as follows:

masculine: -Ø-

feminine: $-a_1nja_2-$

b-class: $-anda_2$

Note that this b-class object marker is identical to the b-class object allomorph which occurs in the indicative mode just when the subject is 3 sg. (p. 128). The feminine object marker is also identical except for the initial a_1.

Examples of transitive imperative verb forms prefixed with ba_2- are:

yinda wandidj /ba_2 - Ø - $\sqrt{w_1u}$/ → bo

'spear' 'make' imp. masc. ob. 'act on'
'Make a spear!'

li /ba_2 - a_1nja_2 - $\sqrt{\text{yila}}$ / → banjela

'watch' imp. fem. ob. 'hold'
'Watch her!'

ŋala /ba_2 - $anda_2$ - $\sqrt{ma(ṛa)}$ → bandumaṛa

'meat' imp. b-class ob. 'bring'
'Bring the meat!'

Where the implicit "subject" is 2 sg. and the object is w-class or m-class, there is no overt imperative marker. Imperative forms consist of an object marker, ma_2- or wa_2- (identical to the indicative ones given in table 18), followed by the verb root.

For example,

gunin /wa_2 - $\sqrt{iniŋa}$ / → winiŋa

'cover' w-class ob. 'put'
'Cover it (w-class)'

waḷay /ma_2 - $\sqrt{yibu}$ → mebu

'turn' m-class ob. 'throw'
'Turn it (m-class)'

These singular "subject" imperatives with w-class and m-class objects, which have the simplest morphology of any verb forms in the language, closely resemble present indicative forms with 3 sg. subjects. But they are always distinguishable from them by the fact that, like all imperative verbs, they lack a tense marker after the root.

Plural "subject" transitive imperative verbs, like their intransitive counterparts (sec. 2.2.6) lack an overt imperative marker. They are identical to the corresponding present indicative forms minus the tense marker after the root. That is, they consist of a (third person) object marker i-, nju-, wu-, mu-, or bu-, followed by the 2 pl. subject marker $-na_2$, followed by the root, e.g.,

li /i - na_2 - $\sqrt{w_1u}$ / → ino

'look at' masc. ob. 2 pl. sub. 'act on'
'You people look at him!'

/nju - na_2 - √ŋuḷu / → njunuŋuḷu

fem. ob. 2 pl. sub. 'give to'
'You people give to her!'

/wu - na_2 - √minda / → wunuminda

w-class ob. 2 pl. sub. 'bring'
'You people bring it (w-class)!'

/ṛidj /mu-na_2 - √ma(ṛa) / → munumaṛa

'pull' m-class ob. 2 pl. sub. 'take'
'You people pull it (m-class)!'

/bu - na_2 - √(r)a / → bunuṛa

3 pl. ob. 2 pl. sub. 'go to'
'You people go to them!'

Note that all of these transitive imperative forms, whether the implicit "subject" be singular or plural, occur with third person objects only. When the object is second person, the imperative is reflexive (sec. 2.2.7) and therefore intransitive. When the object is first person, the strongest available "command" form of the verb is the optative form discussed above, e.g.,

ŋabun /djan - √ŋuḷu - y_1i / → djanŋuḷi

1 sg. ob. 2 sg. sub. 'give to' opt./irr. past
'Give me water!'

/njada$_2$ - √mindjala - y_1i / → njadumindjale

1 pl. ex. 'wait for' opt./irr. past
'Wait for us!'

As a look at table 23 will reveal, when the first person object is plural, as in the latter example above, the subject is not specified on the verb form at all: it could be 2 sg., 2 pl., 3 sg., or 3 pl. Such

formal ambiguity can always be resolved by the use of a free-standing personal pronoun (p. 44) for the second person subject, or an anaphor, demonstrative, or lexical noun-phrase for the third person subject.

2.2.6.2. Negative Imperative

Coate and Oates (1970, pp. 51, 52, 98, 99) notwithstanding, there exists no separate "imperative irrealis" form of the Ngarinjin verb. "Imperative" and "irrealis" are distinct, mutually exclusive modes. Recall, however, that one of the uses of the latter (usually with a specialized mode particle) is negation: it is impossible to negate an Ngarinjin verb without putting it into the irrealis mode. How, then, does one order someone not to do something in this language? Instead of using an imperative form to do so, one uses a non-past irrealis form (pp. 112-13) with a second person subject. Interestingly, when irrealis forms are used in this way (to issue negative commands), they are not accompanied by a negative (or any other) mode particle. I have tried to check this point with Ngarinjin speakers by making up negative commands (using irrealis forms) which included a negative mode particle (wa, way, or buray), sometimes asking them whether I was talking good Ngarinjin in doing so, but I have so far been unable to get people to correct me or to tell me that I positively could not say it that way (as they have done on many other points of grammar and pronunciation). On the other hand, I have never heard a native speaker issuing a negative command using a mode particle, nor do my texts include any instances of such a construction.

The area of "negative imperatives" is one in which there is a curious interaction between mode, tense and aspect: even if the state or action being enjoined against with the irrealis verb is one which is

not yet underway at the time of utterance, the verb is regularly marked for continuative aspect[1] (see sec. 2.2.10). Coate and Oates (1970, p. 51) gloss this as 'don't continue to', which seems inadequate insofar as the action may not have even started. Perhaps in such cases the sense is rather 'continue not to', with a "lowering" of continuative aspect marking (and perhaps imperative marking) onto the verb from a higher negative mode predicate (cf. sec. 3.3.1.4) which gets deleted in surface structure.

Examples of second person irrealis forms used as negative commands are:

bada /anjdja$_2$ - w_2a_2 - $\sqrt{w_1u}$ - yiri/ → anjdja·wiri

'kill' masc. 2 sg. irr. 'act on' cont.
'Don't you (sg.) kill him!'

/njuna$_2$ - w_2*a_2 - $\sqrt{ŋulu}$ - $y_1$iri/ → njunuŋguŋuleri

fem. 2 pl. irr. 'give to' cont.
'Don't you (pl.) give to her!'

djiyan /winjdja$_2$ - w_2a_2 - $\sqrt{ma(ra)}$ - $y_1$iri/ → winjdjamareri

'shame' w-class 2 sg. irr. 'take' cont.
'Don't you (sg.) take shame (be ashamed)!'

ŋarwa /njin - w_2a_2 - $\sqrt{w_1a}$ / → njinguwa

2 sg. irr. 'fall'
'Don't you (sg.) fall!'

wula / gur - w_2a_2 - $\sqrt{ma}$ - $y_1$iri / → gurgumeri

'talk' 2 pl. irr. 'do' cont.
'Don't you (pl.) talk!'

---

[1]Interestingly, this pattern seems to influence some varieties of pidgin English spoken in the area. Continuative aspect is realized by -ing forms of the verb, with zero copula, e.g., Dubela ambaging djelb,'two people are humbugging (i.e., taunting, making fun of, joking, deceiving, "putting on") each other'. Negative imperatives are marked with don, which is Standard English don't. A commonly-heard form of negative imperative in the pidgin, just as in Unarinjin is the continuative form: Don ambagin,'Don't keep humbugging!'

2.2.7. Order Class 10: Reflexive-Reciprocal Voice

Within the Unarinjin verbal system, there is a reflexive-reciprocal category which is opposed to the normal, active voice of the verb exemplified in all the discussion above.

The reflexive-reciprocal (or, more simply, "reflexive") form of the verb signals that the action described by that verb (whether it be transitive or intransitive when not reflexivized) is one which involves a semantic "patient" and that patient, who may or may not also be an "agent," is the same as the referent of the subject NP. Where the subject is grammatically plural, the reflexive form asserts only that all agents and patients are referred to by the same nominal form, without any claim being made about the distinct agent vs. patient status of any of them. From a formal point of view, this is to say that Unarinjin, in common with many languages, knows no grammatical distinction between reflexive and reciprocal.[1] Compare, for instance, the two possible translations for each of the plural examples below.

The reflexive marker for verbs of all classes is /y_1i/, which occurs in order class 10. Its morphophonemics need not be discussed here,

---

[1]The non-distinctness of reciprocal and reflexive is another feature of Unarinjin grammar (and that of other Aboriginal languages spoken in the area) which has its analogue in the local pidgin English. The reflexive-reciprocal pronoun, which does not vary for person, number, or gender, is djelb (<English self). Where the subject/object is non-singular, djelb can be reciprocal or reflexive in meaning, e.g.,

Big mob	olguman	ben	waydjam	djelb
plural	'women'	past	'wash'	ref.

'The women washed each other' or 'The women washed themselves'

There is a reduplicated form of this pronoun, djelb-djelb, which seems to be exclusively reciprocal in meaning. But its use (in place of the reduplicated form) is not obligatory when the sense is reciprocal. Djelb thus realizes a relatively unmarked reflexive-reciprocal category, to which the exclusively reciprocal djelb-djelb category stands in a relation of privative opposition.

for they are entirely regular, and, furthermore, identical to what I have already described for the homophonous irrealis past/optative allomorph y_1i (sec. 2.2.4).

When a root is "reflexivized" by the addition of $-y_1i-$, it becomes morphologically (as well as syntactico-semantically) intransitive, taking the appropriate intransitive pronominal prefix (tables 22 and 25) for the grammatical class of its subject/object. Regardless of what conjugation class the active root belongs to, when reflexivized it goes into (i.e., assumes the tense inflection of) class 7. A reflexive verb can be of any mode, i.e., indicative, irrealis, optative or imperative.

Examples of reflexive-reciprocal forms are:

mara /bur - $\sqrt{w_1u}$ - y_1i - n / → burwin

'see' 3 pl. 'act on' ref. pres.
'They see each other' or 'They see themselves' (as in a mirror, or a pool)

djilibur /a - $\sqrt{ma(ra)}$ - y_1i - ŋga / → amareŋga

'close up' 3 sg. 'take' ref. pres.
'He closed himself up'

baydj / ma_2 - $\sqrt{y\ i}$ - y_1i - n / → men

'raise' m-class 'be' ref. pres.
'It raises itself'

dambun mindi wa djunbaydj / ma_2 - $w*_2a_2$- $\sqrt{w_1a}$ - y_1i/

'country' 'those' 'not' 'join up' m-class irr. 'fall' ref.

→ munguwe
'Those clan countries do not adjoin each other'

me /bur - $\sqrt{ŋulu}$ - y_1i - ŋi / burŋuliŋi

'food' 3 pl. 'give to' ref. opt./irr. past
'Let them give food to each other/themselves' or 'Let them be given food'

waladj /ba_2 - $\sqrt{yibu}$ - y_1i / → bebi

'turn' imp. 'throw' ref.
'Turn yourself around!'

There are a few verbs which behave somewhat idiosyncratically with regard to reflexivization, calling for some comment.

The root $\sqrt{ma}$ when serving as an auxiliary for verbs of saying, or as a framing verb for reported speech (see sec. 3.3.1.3), does not occur in reflexive form. The reflexive verb which replaces it in both of these functions is formed from the root $\sqrt{iniŋa}$, which, as a simple active verb means 'to put' (and is never used in the active voice in either of these two functions).

For example:

bara-bara /bur- $\sqrt{ma}$ - ṛa / → budmaṛa

'talk-talk' 3 pl. 'do' past
'They chatted'

but

bara-bara /bur- $\sqrt{iniŋa}$ - y_1i - ŋga → buriniŋayiŋga

3 pl. 'put' ref. past
'They chatted (to) each other'

yaw / ŋar - $\sqrt{ma}$ → ŋadma

'yes' 1 pl. inc. 'do'
'We say "yes"'

but

yaw / ŋar - $\sqrt{iniŋa}$ - y_1i - n / → ŋariniŋayin

1 pl. inc. 'put' ref. pres.
'We say "yes" to each other"

Note that -$\sqrt{iniŋa}$ + y_1i - in these examples does not yield -<u>iniŋe</u>-, as it would if the a + yi → e rule (sec. 1.2.4.2) were operating normally.

As can be seen in several of the examples on p. 136, that rule does operate as expected when other roots with final a are followed by the reflexive marker. Of all the a-final roots which can serve as auxiliaries (table 20), and all the non-auxiliary ones I have checked out as well, √iniŋa alone (in all its reflexive uses, not merely the "verb of saying" ones) is exceptional in this regard, and it is apparently to be considered lexically as such. (See sec. 2.2.10 for a parallel case involving a different a-root and -yi suffix.)

Another irregularity in reflexive morphology involves the √ma root. As I have noted above, this root does not occur in reflexive form in its otherwise frequent role as a verb of saying (or as an auxiliary in a compound one). But it (or a root resembling it) can occur in reflexive form when paired with any of the other, non-"saying" verbal particles to which it serves as an auxiliary in the active voice.

But the form of the root for purposes of reflexivization in <u>all</u> compound verbs in which it appears (not just in <u>verba dicendi</u>) is √maṛa rather than √ma , e.g.,

bu / a - √ma - ∅ / → ama

'blow' masc. 'do' pres.
'He blows'

but

bu / a - √maṛa - y_1i - n / → amaṛen

masc. 'do' ref. pres.
'He blows (on) himself'

Note that the form taken by the √ma intransitive root here is identical to that taken by transitive √ma(ṛa) in the reflexive voice, as in the example on p. 136, and in the active voice in all the non-indicative

modes (see p. 110, note 4). It is therefore possible to regard this as another case of suppletion, whereby non-verbum dicendi √ma is replaced by the transitive root √ma(ṛa) in the reflexive voice, just as verbum-dicendi √ma is replaced by the transitive root √inin̯a. Alternatively, this √mara can be thought of as merely a voice-specific allomorph of an intransitive root √ma(ṛa), which shows the same two allomorphs as the transitive root √ma(ṛa), but under different grammatical conditions. I see no compelling reason for favoring either of these two solutions over the other, but will adopt the latter out of a constitutional preference for allomorphy over lexical suppletion.

2.2.8. Order Class 8: Coreference Status

For every verb in every (combination of) person, number, and gender, and in every mood, tense, and voice, there exists, alongside the "normal" form treated thus far, an alternate form which Coate and Oates, following Capell, call the "long form."

The function of the "long form" in Un̯arinjin discourse will be treated at some length below (sec. 4.4). Suffice it to say for now that presence of a "long form" signals that the subject of the verb so marked is an NP which is coreferential to one which has occurred in previous discourse (usually in the immediately preceding clause or sentence) and whose reference has been definitely established. Hence I will hereafter call it the d.s. or "definite subject " form.

The d.s. form is distinguished by the presence of a d.s. morpheme, $-iwa_2 \sim ira_2-$, in position 8.

The latter allomorph, $-ira_2-$ is the unrestricted one. It appears

---

[1]The use of the term "definite" here should not be taken to imply that this category functions exactly like that of "definiteness" in English. There are important differences, as we shall see.

in all d.s. verbs except those with an r in the syllable immediately preceding the prefix, in which case the d.s. prefix appears as $-iwa_2-$. This can be explained as a dissimilation, serving to prevent the occurrence of an r in two successive syllables. The $-a_2-$ of both these allomorphs undergoes the usual processes of assimilation, coalescence, or syncope depending on what follows (as per sec. 1.2.4). The -i- of the $-ira_2-$ allomorph (but not the -i- of -iwa-), becomes u when there is a back vowel in the following syllable, regardless of whether that back vowel is underlying or derived (from $-a_2 + w_2u$). Thus this rule of vowel harmony must follow the vowel coalescence rule.

Examples of d.s. verb forms and their corresponding unmarked forms are:

Normal Form	Long Form
/a_1 - $\sqrt{ma}$ - ṛa/ → amaṛa	/a_1 + ira_2 + $\sqrt{ma}$ + ṛa/→ urumaṛa
masc. 'do' past	d.s.
/ma_2 - $\sqrt{ma(ṛa)}$ - ŋa/→ mumaŋa	/ma_2 - ira_2 - $\sqrt{ma(ṛa)}$ -ŋa/→ murumaŋa
m-class 3 sg.'take' past	d.s.
/bur - w_2a_2 - $\sqrt{ma}$ / → burguma	/bur-w_2a_2 - ira_2-$\sqrt{ma}$ / → burguruma
3 pl. irr. 'do'	d.s.
/mar - w_2a_2-$\sqrt{wu}$/→ margo	/mar-w_2a_2-ira_2 - $\sqrt{wu}$ / → marguro
m-class 1 pl. inc. irr. 'act on'	d.s.
/ŋa$_1$- $\sqrt{y\ i}$ / → ŋe	/ŋa$_1$ - ira_2 - $\sqrt{yi}$ / → ŋire
1 sg. 'be'	d.s.
/ŋar - $\sqrt{y\ i}$ - yi / → ŋadi	/ŋar - iwa_2 - $\sqrt{y\ i}$ / → ŋariwe
1 pl. inc. 'be' opt./irr. past	d.s.

Normal Form	Long Form
/ba$_2$- $\sqrt{a}$ - lu / → balu	/ba$_2$ - ira$_2$ - $\sqrt{a}$ - lu / → biralu
imp. 'come' prox.	d.s.
/gur-$\sqrt{y_1ila}$ - y_1i-ŋga / →gudjileŋga	/gur-iwa$_2$ -$\sqrt{yila}$- i-ŋga/ → guriweleŋga
2 pl. 'hold' ref. past	d.s.
/ŋa$_1$ - iy - $\sqrt{ma}$ / → ŋiyma	/ŋa$_2$ - iy -ira$_2$- $\sqrt{ma}$ / → ŋiruma
1 sg. fut. 'do'	d.s.

2.2.9. Order Class 12: Dual/Paucal Number

Any verb form which includes at least one pronominal prefix cross-referencing an agent or patient which is not explicitly singular in number (i.e., not 1 sg. or 2 sg.) may take, in position 12, one number suffix specifying "dual" or "paucal" of one prefixally cross-referenced NP. But which one? With verbs which take only one pronominal prefix (including reflexivized transitives) the answer to this question is obvious, since there is only one cross-referenced NP. With those which take two pronominal prefixes, the answer is equally obvious when only one of the two cross-references an NP which is not explicitly singular. But what if there are two prefixally cross-referenced NPs, neither of which is explicitly singular? An answer to <u>that</u> question is not only not obvious, but, I suspect, not always possible even to native speakers except by recourse to certain discourse-contextual cues. I have not been able to investigate this matter very thoroughly because my texts contain almost no examples of this kind of combination, and naturally-occurring, contextualized examples are far more valuable and reliable than artificially-elicited ones for a question of this kind. The data I did elicit on the question,

however, do suggest certain regularities, which are not without interest for a theory of universal grammar. The general tendency is for the number-suffixed NP to be the one which is higher on a 2-1-3 "person hierarchy." That is, a first person (non-singular) adjunct is more likely to be the one specified by a number suffix than is a third person one, and a second person one is more likely to be it than either a first or a third person one. (Cf. the data on possessive morphology, pp. 95ff.)

Formally, these verbal number suffixes are very similar to the corresponding nominal ones given in table 19, but somewhat simpler in allomorphy. The verbal suffixes are given in table 27 below.

TABLE 27

DUAL AND PAUCAL VERBAL NUMBER SUFFIXES

	Dual	Paucal
After Vowels	-ri-	-na-
Elsewhere	-njiri-	-njina-

Some examples of number-suffixed verb forms are:

/njar - $\sqrt{a}$ - ri / → njayari

1 pl. ex. 'go' du.
'We two go' (for r → y, see pp. 112-13)

wundidj /ŋanda$_2$ - $\sqrt{y_1ila}$ - ni- ri / ŋandelaniri

'spear' 1 sg. -pl. 'hold' past du.
'The two speared me'

baridj /bur - $\sqrt{(r)a}$ - yi - n - njiri/ → budayinjiri

'rise up' 3 pl. 'go to' ref. pres. du.
'The two rise up against one another'

andu /gunda$_2$ - ira$_2$ - √ma(ra) - n - njiri/ gundurumannjiri

'he 2 pl. obj. d.s. pres. du.
'He takes you two'

ganba /gur - √y$_2$i - na/ → gudina

'sing' 2 pl. 'be' pauc.
'You handful of people sing'

wa mara / ban - w$_2$a$_2$ - √w$_1$u - y$_1$i -na/→ banguwina

'not' 'see' 3 pl. 1 sg. (irr.) irr. 'act on' past
'I didn't see that handful of people'

djiyan - ga / wuna$_2$ - √ma(ra) - n - njina /→ wunumannjina

'shame' int. w-class 2 pl. 'take' pres. pauc.
'Are you handful of people ashamed?'

ada / ŋar - √w$_1$a - n - njina / → ŋarwanjina

'sit' 1 pl. inc. 'fall' pres. pauc.
'We handful of people sit down'

2.2.10. Order Class 13: Continuative Aspect

Continuative (as opposed to unmarked) aspect, is marked by a suffix yiri ∿ njiri in position 13. The yiri allomorph occurs after vowels, -njiri- after n or n (which are the only consonants which this morpheme ever follows). The combination of -n + nj- here, as above, yields -nj-. When the -yiri allomorph follows -u, the result is -iri-. When it follows -i-, the resulting i-yi sequence does not yield the expected [i·] (sec. 1.1.2.3.1.1), but is instead pronounced [iyI]. One way to account for this would be to claim that the y of -yiri- is the morphophoneme /y$_2$/ and that the iyi → [i·] rule only applies to the sequence /iy$_1$i/. On the other hand this irregularity might just as well be considered a peculiarity of this particular suffix, since its behavior is irregular in

another, similar way. That is that the -yi- of -yiri-, when it follows the root $\sqrt{a}$ or $\sqrt{(\underset{\cdot}{r})a}$, does not coalesce with it to give -e- as expected, but instead gives -ayi-. This irregularity clearly can not be accounted for by drawing on the distinction between $/y_1/$ and $/y_2/$, because both of these morphophonemes participate in ayi → e mergers elsewhere in the morphology (cf., e.g., pp. 112, 120). Furthermore, as can be seen in the examples below, -yiri itself participates in such a merger whenever it follows any -a- except that of those two particular roots, whose formal identity, because they consist only of a and i, is uniquely threatened by such a merger.

Another peculiarity of -yiri- is that when it follows one of the past indicative allomorphs -ni- or -nji-, the result is -neri/-njeri instead of the expected -niyiri/-njiyiri. This assimilates the indicative past continuative forms of classes 1, 4, and 6 to those of all the other classes, all of which include -eri, arising from -a + yiri.

For some examples of non-past irrealis continuative forms (used as "negative imperatives"), see p. 134. Some additional examples in other tense-mood combinations are:

ni /a$\underset{\jmath}{n}$a$_2$ -$\sqrt{\text{minda}}$ - ni - yiri / → a$\underset{\jmath}{n}$umindaneri

'think' masc. 1 sg. 'take' past cont.
'I was thinking about him'

madu /a$_1$ - $\sqrt{a}$ - yiri/ → ayiri

'walk' masc. 'go' cont.
'He is walking'

wu$\underset{\cdot}{l}$a / $\underset{\jmath}{n}$a$_2$ - iy - $\sqrt{ma}$ - yiri / → $\underset{\jmath}{n}$imeri

'talk' 1 sg. fut. 'do' cont.
'I will be talking'

wa abulan djaridj /a_1 - w_2*a_2- $\sqrt{a}$ - ŋi- yiri / → aŋgaŋiyiri

'not' 'quietly' 'run' masc. irr. 'go' past cont.
'He was not running quietly'

gan-ba /nja -$\sqrt{y_2 i}$ - yiri / → njeyiri

'sing' fem. 'be' cont.
'She is singing'

ŋarwa /ma_2 - $\sqrt{w_1 a}$ - n - njiri / → muwanjiri

'fall' m-class 'fall' pres. cont.
'It is falling'

djarug / wu - $\sqrt{ma(ra)}$ - n - njiri / → wumannjiri

'gather together' w-class 3 sg. 'take' pres. cont.
'He is gathering it together'

2.2.11. Order Class 14: Proximad vs. Distad

In order class 14, the verb may include one of two "directional" suffixes specifying that the action described involves movement toward or away from the speaker (but see sec. 3.3.1.3. for some complications regarding the notion "speaker").

The distad (movement away from speaker) suffix is -nja. (Cf. the hyperdistal demonstrative suffix, table 7).

For example:

/ba_2 - $\sqrt{a}$ - nja / → banja

imp. 'go' dis.
'Go away!'

'balja / nja - $\sqrt{ma}$ - ra - yiri - nja / → njumarerinja

'flee fem. 'do' past cont. dis.
'She was fleeing from here'

winjdjaŋun /$wura_2$ - $\sqrt{ma(ra)}$ - n - nja / → wurumannja

'firewood' w-class 3 sg. 'take' pres. dis.
'They take firewood away from here'

The proximad (movement toward speaker) suffix appears in three allomorphs: /-$w_1$alu/, -alu, and -lu.

The first of these, /-$w_1$alu/, occurs after n and ṇ (which are the only consonants this or any other verbal suffix ever follows) in the expected strengthened form -balu.

For example:

baṛidj / bunda$_2$ -√(ṛ)a - ṇ - $w_1$alu/ → bundṛaṇbalu

'rise up (against)' 3 pl. 3 pl. 'go to' pres. prox.
'They rise up against these people here'

baḍi / a_1 - √wa - n - $w_1$alu / → awanbalu

'arrive' masc. 'fall' pres.
'He arrives here'

The /-$w_1$alu/ allomorph appears (as -walu) when this suffix follows the syllable -ri-.

For example:

gadjinga / gur - wa_2 - √a - ri - walu/ → gurgariwalu

'can't' 2 pl. irr. 'come/go' du. prox.
'You two can't come'

gudu /anda$_2$ - √w_1u - n - njina - yiri - walu/

'chase' 3 pl. ob. 3 sg. 'act on' pres. pauc. cont. prox.

→ andonjineriwalu

'He's chasing a handful of them in this direction'

As these two examples illustrate, the -ri environment must be phonologically, rather than morphologically, specified, because the effect (i.e., the selection of the -$w_1$alu allomorph) is the same regardless of which morpheme the -ri- belongs to.

The -alu allomorph occurs after -ni or -nji, where its a replaces the i vowel as expected (sec. 1.2.4.3).

For example:

ŋarwa / ma_2 - $\sqrt{wa}$ - ni - alu / → muwanalu

'fall' m-class 'fall' past prox.
'It fell this way'

ŋabun bawad-ba / wa_2 - $\sqrt{y_2 i}$ - nji - alu/ → wenjalu

'water' 'come out' w-class 'be' past
'The water came out this way'

In this case it is hard to tell whether the allomorphy is phonologically or morphologically conditioned. For the only instances of -ni and -nji which this suffix ever follows are in the two indicative past tense allomorphs exemplified above. (Compare the similar, clearly morphologically-based irregularity discussed on p. 144, involving these same two past tense allomorphs.)

The "elsewhere" allomorph, which occurs after i in syllables other than the ones specified above, and after all other vowels, is -lu.

For example:

/ba_2 - $\sqrt{a}$ - lu - / → balu

imp. 'come/go' prox.
'Come here!'

djaṛug / $anda_2$ - $\sqrt{ma(ṛa)}$ - ŋa - lu / → andumaŋalu

'push back' 3 pl. 1 sg. 'take' past prox.
'He pushed them back this way'

ṛulug / ma_2 - $\sqrt{a}$ - ŋi - lu / → maŋilu

'shift' m-class 'come/go' opt./irr. past prox.
'Let it be shifted in this direction'

waraydj / ba_2 - ura_2 - $\sqrt{w_1 u}$ - lu → burolu

'scoop' masc. imp. d.s. 'act on' prox.
'Scoop him (a kangaroo carcass) over this way'

waydj /ba_2 - $anda_2$ - $\sqrt{yibu}$ - lu / → bandebulu

'send' imp. 3 pl. ob. 'throw' prox.
'Send them this way'

2.2.12. Order Classes 15 and 16: Dative-Benefactive Cross Reference

In a slot following the one for the directional suffix, any verb may take on a pronominal suffix cross-referencing another NP besides the one or two which are cross-referenced by pronominal prefixes (as per sec. 2.2.2). While a certain pattern or pronominal prefixation (either "transitive" or "intransitive") is rigidly prescribed for every verb root, there are, on the other hand, no roots which require a pronominal suffix. That alone is the most important functional difference between these two kinds of pronominal elements. By contrast, the semantic difference between the adjunct types cross-referenced in these two different ways is sometimes small or non-existent.

There are, for instance, many "intransitive" (i.e., single-prefixing) auxiliary verbs which participate in compound verb phrases taking an adjunct which seems semantically to be just as much a "patient" as are the "objects" of some transitive verbs (see sec. 3.2).

The NP which is cross-referenced by the pronominal suffix on a transitive verb usually stands in a "benefactive" relationship to the action described by it. I use the term with some discomfort, because the action is not always "for the good of," but can be merely "for the sake of." Indeed it is sometimes "to the chagrin of." The only invariant meaning, then, is probably "having an effect on."

These pronominal suffixes, which vary for person and number, are given in table 28.

TABLE 28

DATIVE/BENEFACTIVE SUFFIXES

1 sg.	-ṛa ∿ gaṛa	1 pl. inc.	-ɲarugu-
2 sg.	-nu	1 pl. ex.	-njarugu-
3 sg.	-naɲga	2 pl.	-nurugu-
		3 pl.	-ṇḍu-

Any of the non-singular suffixes may itself be suffixed in position 16, for more precise (dual or paucal) number specification. The dual specifier is -diri after the suffixes ending in -u- and -iri after -ndu-, yielding -ṇḍiri- (as per sec. 1.2.4.3). The paucal specifier is -ana after the suffixes ending in gu-, yielding -gana (see sec. 1.2.4.3) and -na after -ṇḍu-. When the -gu suffixes are suffixed with paucal na-, the /u/'s of the preceding elements, i.e., narᵾ-, njarᵾ-, and nuruᵾ, are, for reasons totally obsucre to me, pronounced [ɪ] in all but the most careful speech.

The 1 sg. allomorph -gaṛa appears after consonants (n and ṇ); ṛa elsewhere.

Except for the 1 sg. and 3 pl. morphemes, all of these pronominal suffixes (or, in some cases, the elements of which they are composed) are recognizably similar or identical to elements occurring elsewhere in the morphology with similar functions. In particular, they are quite similar to the possessive suffixes described in sec. 2.1.5.2.2. (In light of which, see p. 66 for some comments on the morphological composition and affiliations of those suffixes.)

Some examples of verb forms including pronominal suffixes are:

andu ŋur / ŋa$_2$ - iy - √ma - naŋga / → ŋiymanaŋga

'he' 'strike' 1 sg. fut. 'do' 3 sg. d.b.
'I will strike him'

mulṇbun / wa$_2$ - iy - √yi - ṛa / → wiyiṛa

'trouble' w-class fut. 'be' 1 sg. d.b.
'Trouble will be to me' (i.e., 'I'll get into trouble')

di bada /nja$_2$ - √w$_1$u - n - gara / → njongara

'then' 'kill' fem. e sg. 'act on' pres. 1 sg. d.b.
'So then he kills her on me'

woŋay gara / bur - w$_2$a$_2$ - √ma - nu / → burgumanu

'woman' 'might be' 3 pl. irr. 'do' 2 sg. d.b.
'They might call you a woman'

/ba - √minda - lu - ŋarugudiri / → bumindaluŋarugudiri

masc. imp. 'take/bring' prox. 1 du. inc. d.b.
'Bring him to us two'

largari djilibur /a$_1$ - √ma(ṛa) - yi - ŋga - ṇduna /

'Boab tree' 'close up' masc. 'take' ref. past 3 pauc. d.b.

→ amareŋganduna

'The boab tree closed himself up around that handful of people'

gaṇba / njar - √y$_2$i - nji - ri - nurugu / → njarinjirinurugu

'sing' 1 pl. ex. 'be' past du. 2 pl. d.b.
'We two sang for you people'

2.2.13. Order Classes 1 and 9: Simple vs. Compound Verbs

All of the verb roots treated above (sec. 2.2.1) and exemplified thus far are ones which, in inflected form can serve as auxiliaries in compound verbs (see p. 102ff). Although the majority of Uŋaṛinjin verbs (by

both dictionary count and text count) are of this "compound" variety, there are, as mentioned on p. 108, many roots which never serve as auxiliaries, but instead form only "simple verbs." Each of these exclusively "simple verb" roots belongs to one of the conjugation classes into which the auxiliary roots are divided up in table 21. But not all of those classes, it seems, include any non-auxiliary roots. The vast majority of them belong to class 1. A few belong to class 2, and -ṛa-, the class 2 past indicative allomorph, occasionally substitutes for -ni on some class 1 non-auxiliary roots (cf. note 2, p. 110). As far as I have been able to discover, none of these exclusively independent roots belongs to class 3, 4, 5, or 6.[1] Furthermore, almost all of them are transitive. Of the few which are not, all the ones I know of[2] belong to class 7 and are probably reflexive forms by origin (cf. note 5, p. 110) although they lack active counterparts in present-day Uŋaṛinjin. (Any non-class 7 active independent verb, of course, <u>can</u> be reflexivized and hence transposed to class 7, just as auxiliary verbs can be (sec. 2.2.7).) All of the inflectional affixes which do not vary by conjugation class are, of course, common to all independent verbs (not just auxiliaries).

---

[1]Coate and Elkin (1974, p. 462) list at least one root (-umilja) which they cite as taking the past indicative allomorph -ŋa, which would place it in my class 5. On the other hand, they cite some present indicative forms, supposedly built on the same root, which end in -umiljaŋan. This suggests to me that their putative past indicative <u>forms in</u> -umilja-ŋa are actually <u>future</u> (hence suffixless) forms on a root √miljaŋa, which takes the present indicative allomorph -n, and so is probably of class 1.
1. Unfortunately, I did not notice this listing until after I left the field, and this root does not occur in any of my texts, so positive clarification of the matter will have to await further fieldwork.

[2]There are a few forms listed in Coate and Elkin 1974, which would appear to be exceptions, but all of them are strange to me, and will have to be checked out in the field.

A few sentences including some of the more common exclusively independent verbs are:

class 2 or class 1 bagi / ŋa$_2$ - a$_2$ - √wilja / → ŋuwilja
'rock wallaby' masc. ob. 1 sg. sub. fut. 'spear'
'I will (want to) spear a rock wallaby'

class 7 banjdja muna-ṛa / a$_1$ - √w$_1$ude - ŋga / → odeŋga
'cave' 'this' loc. masc. 'become a painting' past
'In this cave he (a wandjuṇa) became a painting'

class 1 /anda$_2$ - √w$_1$udidjila - ni / → andodidjilani
3 pl. ob. 3 sg. sub. 'wait for' past
'He waited for them'

class 1 /ban - w$_2$a$_2$ - √ya(ṛa) / → bangiyaṛa
2 pl. ob. 1 sg. sub. irr. 'row with'
'I might have a row with them'

class 1 anjdja - gu / djan - √w$_1$awa - n / → djanbawan
'why' 1 sg. ob. 2 sg. sub. 'not recognize' pres.
'Why don't you recognize me?'

class 1 /wura$_2$ - a$_2$ - √miyaŋga / → wurumiyaŋga
w-class ob. 3 pl. sub. fut. 'understand'
'They will understand it'

class 1 ŋadjiŋarumbu /ŋada$_2$ - √mimbu - ni / → ŋadumimbini
'our mothers' 1 pl. inc. ob. 'show' past
'Our mothers showed (it to) us'

class 2 ya·ra /a$_1$ - √malima - ṛa/ → amalimaṛa
'hill kangaroo' masc. ob. 3 sg. sub. 'spear' past
'He speared a hill kangaroo'

class 1 ɲin / njin - √argu - ni - yiri / → njinarguneri

'I' 2 sg. ob. 1 sg. sub. 'test' past
'I was testing you'

class 1 andu / gunda$_2$ - √ɲiljawa - n / → gunduɲiljawan

'he' 2 pl. ob. 3 sg. sub. 'know' pres.
'He knows you people'

The majority of Uŋarinjin verbs, as noted above, are of the compound type, which is abundantly represented among the examples given so far in this chapter.

Each compound verb, as shown in figure 3 (p. 103), consists of two words: a non-finite verbal particle followed by one of the fourteen auxiliary verbs, which is always inflected for person, number, gender, tense, mode, and voice, and may also be inflected for any or all of the following: coreference status of one adjunct, direction of motion with respect to speaker, continuative aspect, and person-number of "benefactive" NP. The auxiliary, it is clear, carries most of the grammatical weight of the compound verb. Its contribution to the specific lexicalized meaning that emerges in glosses is, by contrast, quite small. Although my interlinear translations of sentences with compound verbs include a gloss for each auxiliary root, based on the meaning which that root bears when occurring as a simple verb, it is obvious from most of my free translations that that isolated meaning is of little relevance for the meaning of the bipartite compound.[1] Do the auxiliary roots, one wonders, make any

[1]This is perhaps not true only in the case of the class 1 transitive root √w$_1$u which I gloss as "act on." But the exception proves the rule: √w$_1$u alone among the transitive auxiliaries never occurs in isolation as a simple verb, so I can afford to give it a gloss which is so general that it hardly could be incompatible with the meaning of any particular transitive compound verb. On the other hand, √w$_1$u need not be present at all to carry this meaning, since all transitive verbs are "active," and the compound is specified as transitive by the presence of transitive-series pronominal prefixes.

contribution to meaning at all when occurring in such compounds?

I submit that they do, but that their meanings are almost entirely "selectional."

What the auxiliaries do is to classify the verbal particles with which they occur, much as Ụ̇arinjin lexical nouns are classified by the various gender-bearing pronominal elements with which they enter into appositional relations. Recall that each noun takes pronominals of a particular gender, the resulting classification being partly arbitrary and partly semantically motivated, by such features as +/ - male, +/- arboreal, +/- liquid, etc. Similarly, verbal particles characteristically occur with certain auxiliary verbs, the resulting classification being partly arbitrary, and partly systematic, depending on certain basic semantic features of the particles. Insofar as the classification is semantically consistent, the classes are roughly as shown in table 29.

It will be noted that not all these characterizations are mutually exclusive. In that respect this system differs from the gender system. While all the terms of that system stand to each other in relations of multilateral equipollent opposition, many of the relations within this system are privative oppositions. Some of the auxiliary classes, it follows, are more basic than others. Among the intransitive classes one can see that the $\sqrt{\text{ma}}$ class is specified so as to include all the others, except for the stative subset of the $\sqrt{\text{y}_2\text{i}}$ class. At the opposite end of the inclusion hierarchy for intransitives, the $\sqrt{\text{y}_1\text{inde}}$ class includes nothing but a subset of the $\sqrt{\text{w}_1\text{a}}$ class. Among the transitive classes, the $\sqrt{\text{w}_1\text{u}}$ class is the basic one, including all the others (with the possible exceptions of $\sqrt{(\text{r})\text{a}}$ and $\sqrt{\text{mindjala}}$). These

TABLE 29

SEMANTICS OF AUXILIARY ROOT CLASSES

	Root	Semantic Characterization of Particle
Intransitive	√ma	involves action as opposed to state
	√yai	involves state or upward motion
	√a	involves motion within a horizontal plane
	√w$_1$a	involves downward motion
	√y$_1$ inde	involves clumsy or uncontrolled downward motion
Transitive	√w$_1$u	involves action by A[1] on P[2]
	√ma(ṛa)	involves action by A causing motion in P
	√minda	involves action by A causing motion in P
	√iniɲa	involves action by A causing change of location or state in P
	√y$_1$ibu	involves action by A causing P to move within the horizontal
	√ɲulu̇	involves action by A causing X[3] to move to P
	√y$_1$ila	involves action by A on P which does not cause movement on P
	√(ṛ)a	involves movement of A to P
	√mindjala	involves action by A in the presence of P

[1]A = agent

[2]P = patient

[3]X = nonagent-or-patient

relations of markedness in the underlying ideal semantic system are supported by the surface distributional evidence: √ma and √w$_1$u are by far the most commonly occurring and unpredictably paired intransitive and transitive roots respectively. By contrast √yinde is very infrequent and occurs with only a small set of particles.

If the auxiliary system differs from the gender system in the nature of its oppositions, it is similar in the degree to which it abandons semantic consistency. Just as gender classification is only partly semantically motivated, so the tentative scheme I have given above for the semantics of auxiliary classification is only indirectly reflected by the actual assignment of auxiliaries to the total set of verbal particles in the lexicon. While a look at some of the pairings shown in numerous examples throughout this work will, I hope, reveal enough consistency to support a scheme something like the one given here, it will also reveal a residue of exceptions of the kind which always charcterizes the relationship between overt segmentable forms and underlying semantic categorizations (cf. Whorf 1956, p. 80ff).

As with gender classification, the semantic principles underlying the classification of verbal particles by auxiliary co-occurrence are especially clear in cases where one lexical item (or, if you will, multiple, homophonous lexical items with related meanings) occurs in more than one class. Among verbal particles, unlike among lexical nouns, multiple class membership is the rule rather than the exception. Many particles occur, in related meanings, with one transitive and one intransitive auxiliary. Almost as often there are alternate possibilities among the transitive and/or intransitive auxiliaries the particle can take. In all these cases, the auxiliary serves to subcategorize the meaning of the particle, much as some lexical nouns are subcategorized by alternating gender-concord morphemes

(see sec. 2.1.5.1). Just as semantic features such as + male, + female, and - human come to the fore where there is gender subcategorization, so the semantic differentiae among auxiliary classes given above figure especially strongly in the subcategorization of verbal particles. Examples of the latter are given in table 30.

2.2.14. Order Class 2: Aspect of Compound Verbs

As discussed above (sec. 2.2.10), any finite verbal word may take, in position 13, a suffix indicating continuative aspect. In compound verbs, the verbal particle (order class 1) may also be suffixed for aspect, taking one of two alternate aspect markers which occur in position 2.

By far the most commonly occurring of these is an <u>iterative marker</u> $-w_1a$, which strengthens in the expected environments (see sec. 1.2.2) to -ba. The presence of this suffix indicates that the action being described is one which takes place as a series of discrete, repeated sub-actions.

For example:

gandjal ingar - w_1a / njada$_2$ - $\sqrt{\text{ma(ṛa)}}$ - ŋa/ → njadumaŋa

'airplane' 'pick up' iter. 1 pl. ex. ob, 'take' past
(literally:
'eagle hawk')
'The airplane picked us up one by one'

wa / ŋoydj - w_1a/ → ŋoyba / njar - w_2a_2 - $\sqrt{\text{y}_2\text{i}}$ - ŋi/ → njarginji

'not' 'breathe' iter. 1 pl. ex. irr. 'be' past
'We could not breathe (where breathing is pictured as the actual repetitive movements of the chest)'

There are some particles which occur with the $-w_1a$ suffix more often than not, presumably because activities they describe are inherently iterative. The word <u>ŋoydj</u> 'to breathe' in the second example above, is one such. Another

TABLE 30

EXAMPLES OF SUBCATEGORIZATION BY AUXILIARY CLASS

ada 'sit'	+ $\sqrt{y_2 i}$	('state') = 'be sitting'
	+ $\sqrt{w_1 a}$	('downward motion') = 'sit down'
	+ $\sqrt{ma}$	('action') = 'take a sitting position'
	+ $\sqrt{w_1 u}$	('action by A on P')[1] = 'sit on'
	+ $\sqrt{yila}$	('action by A not causing motion in P') = 'sit with'
linj 'look'	+ $\sqrt{y_2 i}$	('state') = 'look'
	+ $\sqrt{y_1 ila}$	('action by A not causing motion in P') = 'look at'
baridj 'rise, raise'	+ $\sqrt{y_2 i}$	('upward motion') = 'rise'
	+ $\sqrt{minda}$	('action by A causing motion in P') = 'raise
balja 'flee'	+ $\sqrt{ma}$	('action) = 'flee'
	+ $\sqrt{(r)a}$	('movement of A to P') = 'flee to'
	+ $\sqrt{minda}$	('action by A causing motion in P') = 'flee with'
waydj 'throw'	+ $\sqrt{w_1 a}$	('downward motion') = 'plop oneself down'
	+ $\sqrt{y_1 ibu}$	('action by A causing motion in P') = 'throw'
debar 'die'	+ $\sqrt{a}$	('horizontal motion') = 'die'
	+ $\sqrt{y_2 i}$	('state') = 'be dead'
	+ $\sqrt{w_1 u}$	('action by A on P') = 'extinguish'
dar 'stand'	+ $\sqrt{ma}$	('action') = 'take a standing position'
	+ $\sqrt{inina}$	('action by A causing change of location or state in P') = 'cause to stand'
djari 'leave'	+ $\sqrt{a}$	('horizontal motion') = 'go away'
	+ $\sqrt{w_1 u}$	('action by A on P') = 'abandon'

[1] A = agent; P = patient

is gan 'to sing', Unarinjin songs consisting of short strophes which are always run through more than one repetition at a singing.

Particles marked for iterativity, it is worth noting, may enter into compounds with auxiliaries which are marked for continuative aspect, permitting a kind of "compound aspect," the iterative-continuative, which means something like 'to do iteratively at length', e.g.,

/burgaydj - w_1a ŋa$_1$ - $\sqrt{w_1 a}$ - ni - yiri / → burgaywa ŋawaneri

'ask' iter. 1 sg. 'fall' past cont.
'I kept asking around (i.e., asking different people)'

Alternatively, the verbal particle may be marked for "punctual" aspect with the suffix - $w_1$ini (∿ -bini). The presence of this suffix specifies that the action described is a single, discrete, very rapid one, e.g.,

ŋala /wuraydj - $w_1$ini bur - $\sqrt{y_2 i}$ - ŋi/→ wuraybini budjiŋi

'meat' 'dump' punc. b-class 'be' opt./irr. past
'Let the meat be (quickly) dumped'

ŋur - $w_1$ini /nja$_2$ - $\sqrt{ma}$ - ṛa - naŋga/ → njumaranaŋga

'hit' punc. fem. 'do' past 3 sg. d.b.
'She dealt him a sudden blow'

My texts include no examples of particles suffixed for punctuality combined in compounds with auxiliaries marked with the continuative suffix (which is not surprising in view of the apparent incompatibility of these two categories).

2.3. Adverbs

There is little to say here about the class of primary adverbs in Unarinjin, for there is nothing distinctive about their morphology.

There is a suffix for deriving adverbs from words of other classes (see sec. 2.6.3), but primary adverbs are not identifiable as such by their morphology.

If there are grounds for isolating such a class, they are negative ones: adverbs are words which do not inflect for person, number, or gender (distinguishing them from verbs, nouns, and adjectives), which do not regularly appear as isolated utterances (distinguishing them from interjections), and which can appear in construction with a verb of any mode (distinguishing them from mode particles). For examples of sentences which include adverbs, see pp. 166, 189.

2.4. Mode Particles

The class of "mode particles" can be defined by a single distributional criterion: a mode particle is a word which always appears in construction with a verb, each particle occurring only with verbs of particular modes. Like adverbs, mode particles show no class-specific morphological characteristics, so there is little to say about them here. The entire set of them is quite small and will be treated under "sentence grammar" below.

2.5. Interjections

I define "interjections" as the class of words which regularly appear in isolation as single-word utterances. For a list of them, see Coate and Oates 1970, p. 63, sec. 10.a.4.

2.6. Derivational Suffixes

Having at least mentioned all of the word classes of Unarinjin, including the various sub-classes of the nominal and verbal systems, I turn now to a consideration of the means by which words of one class are

derived from those of another. All such derivations involve the use of suffixes, which are treated below in order of the class of words they form.

2.6.1. Nominal Derivation

2.6.1.1. bada

This suffix is used to derive human (or higher animate) nouns of a particular kind from other nouns or from verbal particles. The meaning of -bada in such derived forms can be glossed roughly as 'one who regularly[1] does, or is concerned with'.

Some examples are:

yedj - bada		'one who smiles a lot'
'to smile'		
lindidj - bada		'an accomplished pressure flaker'
'to pressure flake'		
goidj - bada		'one who drinks too much'
'to drink'		
mili -bada		'a man who is obsessed with sex'
'vagina'		
ŋalaynj - bada		'one who has the power to cast evil spells by singing'
'sing an evil spell'		
yaw - bada		'one who insults people a lot'
'to insult'		

[1]Thus, insofar as these forms are "agentives," they are of the -ter (as opposed to -tor) variety in Benveniste's well known typology (Benveniste 1948, p. 62).

2.6.1.2 -maró

This suffix, though apparently somewhat archaic and less productive, is similar in distribution and function to -baḍa, discussed above. -maró, that is, occurs on nouns and verbal particles to form a kind of "agentive" noun. But whereas a noun in -baḍa carries the meaning that the "agent" is one who regularly, habitually, or "by nature" does or is concerned with the thing indicated, a noun in -maró does not.[1] Most forms in -maró that I have come across refer to Wanjjunas (see Capell 1939) or other beings of the mythic past who are described as having done or been concerned with the thing indicated in the -maró form, within the context of a particular story which is told about them. By association the -maró word is then often used also to refer to the place at which the event occurred.[2]

Examples of -maró forms are:

ṛalidj - maró 'The one who shone'

'to shine'

yug - maró 'The one who vomited'

'vomit'

2.6.1.3. -moya (∿ -maya)

This suffix too is used on nouns and verbal particles to derive human or higher animate nouns. I am unable to account for the a/o alternation in this morpheme on either phonological or semantic grounds. Regardless of this alternation, the meaning of the suffix is something like:

[1]These, then, are agentives of Benveniste's (1948, p. 62) -tor type.

[2]See sec. 3.3.1.1.1 below for an alternate means of carrying out both of these functions, which has largely replaced the -maró derivation in present-day Unarinjin.

'one who has been permanently affected (usually adversely) by an incident crucially involving . . .'

For example:

banan	- moya	'a youth who has reached marriageable age'
'to reach marriageable age'		
wilmed	-maya	'one who sustained injury in an incident involving wire'
'wire'		
djunuri	- moya	'one who sustained injury in an incident involving a boab tree'
'boab'		

Unlike -bada, the suffix -maya ∿ -moya is most often used to form personal names. Most -maya ∿ -moya derivatives, that is to say, are understood to have definite reference to unique individuals; rather than being applicable to classes of individuals. This is true, for instance, of the last two of the three examples above (though decidedly untrue of the first one). Wilmed - maya, also called Waya-maya (i.e., 'wire-maya') is a particular individual at Mowanjum who is known to have suffered an accident in which he got wrapped up in a tangle of barbed wire. Djunuri-moya is another man from Mowanjum whose unlikely fate it once was to have a boab tree fall over on top of him. Interestingly, just where such incidents are the basis for personal names of this kind, the suffix -maya ∿ -moya is often omitted. The two men just mentioned, for instance, are most commonly called Wilmed and Djunuri.

2.6.1.4. -madi

This suffix is used on nouns and verbal particles to derive nouns for which the suffix can be glossed "place of." These are usually proper

toponyms, which are understood to refer to one particular place meeting that description, e.g.,

winjdja - madi 'Place where bamboo grows'
'bamboo'

minjdjal - madi 'Eating place'
'to eat'

ŋarud - madi 'Wild melon place'
'wild melon'

wandimi - madi 'What-cha-ma call it place'
'what-cha-ma call it'

2.6.2. Adjectival Derivatives in -gadjin

This suffix is used to derive, from nouns, adjectives meaning "resembling, or similar to" the thing referred to by the noun. These derived adjectives, regardless of their phonological shape, never take pronominal prefixes (cf. sec. 2.1.5.2.4).

Some examples are:

woŋay - gadjin '(looks) like a woman' (said of a man with long hair)
'woman'

mayga - gadjin '(tastes) like crushed ants' (said of lemon juice)
'crushed ants'

djimbila - gadjin '(flakes) like insulator glass' (said of a certain red or yellow colored stone)
'insulator glass'

2.6.3. Adverbial Derivatives in -w_1a

The suffix w_1a (∿ ba) appears on adjectives and nouns, turning

them into adverbs. Most of the denominal ones are rather difficult to translate into English because we have no regular means of deriving adverbs from nouns (except for that pedant's bane, the -wise derivation, which is, however, more limited than -ba in its applications, even by the most unrestrained users).

Examples of derived adverbs in -w_1a are:

ada umari medjeri - wa

'sit' 'the 2 do' 'two'
'The two (demons-turned-to-stone) sit there, dually'

belen - ba madu aŋga

'rear' 'walk' 'he went'
'He went along behind'

ganda - ri - wa dalag winji

'this' du. 'penetrate' 'it (bamboo) did'
'These-two-places-wise it penetrated' (said of a bamboo spear which pierced the flesh in one place, and passed through, and protruded out through another)

nambad budmen walgu - wa gundu - wa

'come together' 'they do to each other' 'woman' 'husband'
'They come together as husband and wife'

The form of this adverbializing suffix, it may have been noticed, is identical to that of the iterative suffix which appears on verbal particles. The two -w_1a suffixes have such different functions that their formal identity in present day Uŋarinjin seems purely accidental. What the historic relationship may have been is an interesting question whose investigation awaits firm comparative evidence.

2.6.4. Pan-Class Suffixation

All of the suffixes treated immediately above (sec. 2.6.1-2.6.3) are ones which can be suffixed to words of only one, or at most two different classes. The suffixes treated in this section are those which are not so limited in distribution. Most of them, indeed, can occur on a word of any class.

The other thing that sets these suffixes apart from those is that, with the possible exception of the last two, -ŋala and -ŋari, they are not derivational suffixes. That is, they do not change the grammatical class of the words to which they are suffixed.

2.6.4.1. -$y_2$ali

This suffix, which strengthens to -dali in the expected environments (pp. 27ff), can be affixed to a word of any class. Its meaning is emphatic. It says, of the thing referred to by the word to which it is affixed, 'this indeed'. For some examples, see p. 28.

2.6.4.2. -ŋa

This suffix too can be affixed to a word of any class. It has a function in discourse which is complementary to that of -$y_2$ali (above). It too is emphatic in meaning, but with a somewhat different force: while -$y_2$ali simply affirms, -ŋa emphasizes by implied comparison. The latter, that is, always carries with it the idea that there are other (at least conceivable) "things" from among which this one in particular is singled out for emphasis. If -$y_2$ali can be glossed 'indeed', -ŋa must be glossed 'especially', 'just', 'alone' or 'only'.

For example:

abuḷan - ŋa ridj warmaŋa

'gentle' 'pull' 'we took it'

'We pulled it especially (very) gently'

ɲaɲan - ŋa ŋaḷa njindi

'you (sg.)' 'sick' 'you are'
'You alone are sick'

ŋaḷa - ŋa njindi

'sick' 'you are'
'You're just (or especially) sick'

ni - ŋa mudmindani maŋari mindi

'think' 'they took it' 'food' 'that'
'They only thought about that food'

2.6.4.3. -ga

This element appears on words of every class. Its basic function is negation, one which it shares with the negative mode particle wa (sec. 3.3.1.4.1). But whereas wa negates whole propositions, -ga negates single words or phrases. The negated constituent usually appears in sentence-initial "focussed" position and the verb is marked for irrealis mode, just as it would be if wa were doing the negating.

For example:

aniŋgen - ga /a_1-$w^*_2a_2$ - $\sqrt{a}$ -ni - lu / → aŋgaŋi

'for himself' masc.-irr. 'come/go' past prox.
'Not for himself has he come here'

djandu - ga /a_1 - $w^*_2a_2$ - $\sqrt{y_2i}$ - ŋi/ → aŋgeŋi

'ordinary' masc. - irr. 'be' past
'He was no ordinary man'

djigal - ga /ŋar - w_2a_2 $\sqrt{a}$ - yiri/ ŋargayiri

'lie' 1 pl. ex. irr. 'come/go' cont.
'Lying we are not'

abulan-ga djari / wu - $w^*_2a_2$ -$\sqrt{\text{minda}}$ -yi -yiri/→wuŋgumindeyiri

'gently' 'move' w-class 3 sg. irr. 'take' past cont.
'He didn't take it (a boat) in gently'

Negative -ga also appears in copulative clauses which have no overt verb, in which case there is, of course, no overt irrealis marking.

For example:

/ma_2 - yiri - ga/ → meriga mindi

m-class 'one' m-class: 'it'
'It is not unique' (i.e., 'There is more than one')

nuŋgula - ga - gude - ga djina

'fatigue' com. masc: 'he'
'He is tireless'

As the latter example illustrates, negative -ga can be used "distributively." A "double negative," that is, is negative rather than positive in meaning.

In addition to (and, as I see it, deriving secondarily from) the negative function just described, the element -ga performs another related, but syntactically distinct function: it serves as an interrogative marker.

Like its negative counterpart, interrogative -ga usually appears enclitic to the first word of the sentence. But interrogative -ga is distinguishable from negative -ga in that, while the latter appears in construction with irrealis verbs, the former appears in construction with indicative ones.

For example:

manjdjan - ga /$anda_2$ - $\sqrt{ma(ra)}$ - lu/ → andumaralu

'money' b-class 3 sg. 'take/bring' prox.
'Is he going to bring money?'

bad - ga /$bunda_2$ - $\sqrt{ma(ra)}$ - ŋa/ → bundumaŋa

'grease' b-class 3 pl. 'take/bring' past
'Did they grease it?'

djina - ga wandidj /wu_2 - $\sqrt{wu}$ - ni - ŋari/→woniŋari

'he' 'make' w-class 3 sg. 'act on' past rel.

'Is he the one who made it?'

ŋin-ga

'I'

'Who, me?'

2.6.4.4. -$w_1$ini (∿ -bini)

This suffix has alread been discussed (sec. 2.2.14) with respect to its occurrence on verbal particles as a punctual aspect marker. It also occurs on words of other classes with a closely related function. This happens so seldom that I cannot yet say with certainty what class restrictions there are (if any) on its occurrence. The meaning of -$w_1$ini in such cases is hard to gloss uniformly, but there is definitely an invariant element involved, and it is one which these other uses of -$w_1$ini have in common with its use as an aspect marker.

Consider, for instance, the following case. There is a temporal adjective ganaŋgan, which is the usual word for 'now'. But this word is not one which reckons the present as an infinitesimal point moving along a time line. Rather, if the image of the line is appropriate at all, ganaŋgan must be thought of as a segment along the line, whose length varies according to contextual factors. It is usually shorter than a day and its end points accordingly are usually somewhere between last night and tonight. (ganaŋgan is, in fact, the usual word for 'today'.) What is of interest here is that, in order to convey the idea of a punctual "now"--one which does reckon the present as a point--the word ganaŋgan is suffixed with -wini, just as verbal particles are suffixed with -bini in order to portray an action as an instantaneous one.

This contrast can be seen in the following stretch of text:

ganaŋgan badi aŋani . . .

'today' 'come to' 'I have come to him'

ganaŋgan - bini budju aŋonjiri

'now' 'finish' 'I am doing him'
'I have come to him today (now) . . . (and) right now I'm finishing up with him'

In all of these cases in which -$w_1$ini appears on other words besides verbal particles, there seems to be something of this "punctual" sense. Where the suffixed word is not a temporal one, the meaning is something like 'precisely' or 'exactly'.

For example:

anjdja - wini goidj njindinji

'what?' 'drink' 'you were'
'Exactly what (or 'how much') did you drink?'

ŋiyanamala - wini wari minji

'my hand (finger)' 'burn' 'it did'
'I got burned right on the finger' (n.b.: There is no separate word for 'finger')

2.6.4.5. -dje

This suffix appears on verbal particles, where its meaning can be glossed 'again'. It also appears on finite verbs with the same meaning.

For example:

burŋulinga - dje

'They gave to each other again' (or 'were given to again')

balu - dje

'Come here again'

/dalidj - dje njinjdja $-w_2a_2-\sqrt{ma(ra)}$/→ dalidje njinjdja·mara

'call the 'again' fem. 2 sg. irr.
name of'
'Don't call her name again!'

malŋana mindi wud - dje / ŋan $-w_2a_2-\sqrt{a}$ -yiri-nja/→ ŋangayirinja

'creek' m-class 'swim''again' 1 sg. irr. 'go' cont. dis.
'I might be swimming away over that creek again'

As these examples suggest, this suffix seems to be allowed to occur on the finite verb just when it is not paired with a verbal particle. Compound verbs, on the other hand, take the suffix on the particle.

But -dje also occurs on words which are outside the verbal system altogether, in which case it functions somewhat differently. The meaning is still 'again', but now the implied repetition is something which is asserted, not about the action described, but rather about the act of describing. If -dje on verbal words means 'just as happened before', its meaning on non-verbal ones (and, sometimes, ambiguously, on verbal ones as well) is: 'just as I said before'. This then is the "again" which in English is set off by a special intonation pattern--one which, in written English, is represented by setting the word off by commas, as in the second example below. Examples of -dje on non-verbal words are:

banman - dje djiri

'magician' 'he'
'To speak again of magicians, he is one' (or, simply 'He is another magician'

gunja - dje njinmeri

'what' 'you are doing'
'What, again, are you doing?'

2.6.4.6. -/$w_1$alu/ ∿ -wula

This suffix appears on nouns, adjectives and pronouns, where it has

a function similar to the ablative-elative use of the case postposition -nanga (p. 99). But -$w_1$alu ∿ -wula cannot be considered a case marker, because its meaning is deictic. While ablative-elative -nanga means 'motion away from, or originating at', -$w_1$alu ∿ -wula means 'motion towards speaker, away from, or originating at'. Thus, although case-like in one way, it is in another way closer in function to the proximad verbal suffix (sec. 2.2.11) with which it has the -$w_1$alu (balu) allomorph in common.

I am unable to account completely for the alternation between the /$w_1$alu/ and -wula allomorphs of this suffix. All I can say is that in environments in which w undergoes strengthening (i.e., after stops and nasals), the -wula (→*-bula ∿ *-gula) allomorph never occurs. That alone is sufficient to guarantee that -wula is an allomorph of /$w_1$alu/, and not some distinct suffix with a slightly different meaning. But in non-strengthening environments there is an alternation between -wula and -walu for which I have been unable to discover any sort of regular conditioning factors.

Some examples of this suffix are:

muno - walu gara ayiriwalu

'over there' 'maybe' 'he is coming'
'Maybe he is coming here from over that way'

garen - balu madu anga

'Gracie's knob' 'walk' 'he came'
'He walked here from Gracie's knob'

gunjal - wula djina

'where' 'he'
'Where is he (here) from?'

ŋular - walu djina

'northeast' 'he'
'He's (here) from the northeast'

2.6.4.7. -ŋala

This suffix occurs on nouns, pronouns, adjectives, and interjections. Coate and Oates (1970, p. 35) notwithstanding, it appears not to serve any particular grammatical function, nor does it affect meaning very much. It is perhaps a weaker version of -ŋa, discussed above (sec. 2.6.4.2) in that what it seems to do is to add what may be described as a weak "particularizing" force.

For example:

nurun - ŋala

'you (pl.)'
'you people'

andu bodj - ŋala

'he' 'boss'
'He's the boss man'

andu wudja - ŋala

'he' 'different'
'He's a different one'

wali - ŋala buray - ŋala buray, wali!

'wait/still' 'not/no/nothing'
'Not yet! No! Wait!'

It is possible that -ŋala should be interpreted as a nominalizing suffix. But examples such as the last one above cast some doubt upon this interpretation.

2.6.4.8. -ŋari

This suffix appears on nouns, adjectives, adverbs, and finite

verbal words. Its function when appearing on verbs is a distinct (and very important) syntactic one, which will be treated at length in the next chapter (sec. 3.3.1.1). When suffixed to words of other classes, -ŋari has a function similar to that of -ŋala (both suffixes probably being at least historically related to the -ŋa suffix (sec. 2.6.4.2). When suffixed to nouns or adjectives, -ŋari usually (but not always) seems to have the effect of turning them into nouns meaning 'one person/thing characterized by _____'.

Examples of -ŋari on non-verbal words are:

buroli - ŋari

'hair'
'hairy one' (idiom for 'dog')

balu muṇa-muṇa-ŋari

'come' 'quickly'
'Come quickly'

dubala - ŋari

'red/yellow'
'red-yellow colored person' (i.e., 'person of mixed | Aboriginal-non-Aboriginal | descent', or 'a red-yellow thing')

CHAPTER 3

SENTENCE SYNTAX AND SEMANTICS

3.1. Phrase Types

3.1.1. Verb Phrases?

There is no constituent type in Unarinjin which corresponds to the traditional notion "verb phrase."

Because the verb itself always incorporates pronominal elements cross-referencing its major grammatical adjuncts, it can more appropriately be thought of as pronominalized "replica" of the sentence than as a sentence constituent belonging to the same order of structure as does the noun phrase (cf. pp. 184ff.).

3.1.2. The Noun Phrase

An Unarinjin noun phrase may be of any of the structural types shown in table 31.

Type I, in which the NP takes the form of a single lexical noun or personal pronoun, need not concern us here since it does not involve any NP-internal syntax. (See, instead, sec. 2.1.)

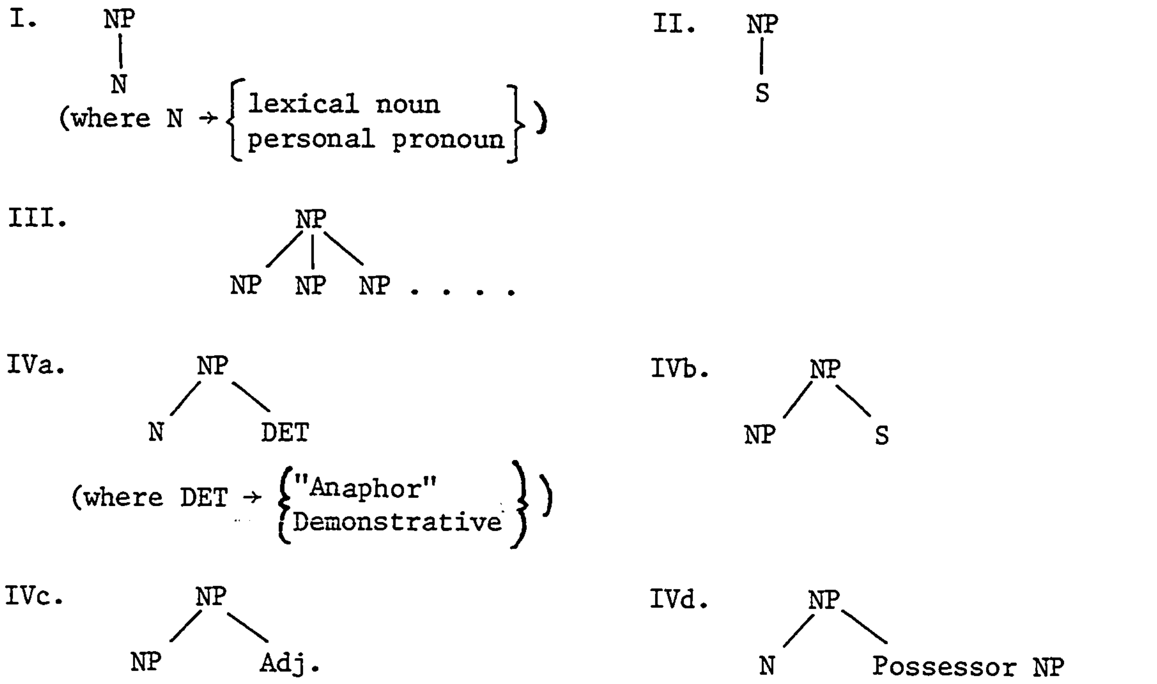
Type II, since it is a clausal NP constituent type, is treated in a later section (pp. 191ff.).

Type III, the coordinate NP, calls for some comment here.

First, note that each of the coordinated constituents is itself an NP and hence may be "rewritten" in any of the five ways corresponding to each of the other NP types.

TABLE 31

NP STRUCTURAL TYPES



Coordination itself is effected in two ways:

1) By simple juxtaposition, combined with the operation of number/ gender concord, e.g.,

[[$_{NP}$ gaṇaŋinjdja 'emu' buna collective-proximal] [$_{NP}$ djebara 'turkey bustard' buna] Coordinate NP

[$_{NP}$ wuḷumaṛa 'turtle'] [$_{NP}$ djaya 'fish' buna] coordinate NP]

biri-ŋa wanjdji andoniri

b-class anaphor 'collect a lot' b-class-3 sg.-$\sqrt{wu_1}$-past-cont.

'He had been laying up a supply of emu, turkey, turtle, and fish.'

2) By the use of a special "coordinating" postposition: -yá after vowels, -á after consonants.

Unlike Greek -τε and Sanskrit -ca (of which it is otherwise reminiscent) á ∿ yá serves to conjoin the NP on which it occurs to the one which follows it (rather than to the one which precedes it, as in the Greek-Sanskrit case).

For example:

wada burwin bunda brṛu

'like' 3 pl. - $\sqrt{w_1 u}$-ref.-pres. 3 pl. proximal 'people' (i.e., Aborigines)

wiyowila - yá munuṇaŋga

'pubescent boys' 'pubescent girls'

'These aborigines--pubescent boys and girls--they like each other.'

There appears to be no difference in meaning between these two formal means of coordination. In a sense the -yá ∿ -á postposition merely reinforces a "coordinating" effect which is already there by virtue of juxtaposition combined with gender/number concord.

Whether or not they make use of -yá ∿ -á, coordinate NPs are subject to a certain restriction which seems to arise from the nature of the gender/number system, viz.:

No coordinate noun phrase which includes, as one of its immediate constituents, a non-pluralizable noun (see pp. 53-54) may stand in apposition to a pronominal element unless all of its other immediate constituents are nouns of the same gender.

The most important consequence of this restriction is that no such noun phrase may serve as a cross-referenced grammatical adjunct. Thus, while human nouns, which are masculine, feminine, or non-singular,

may all be coordinated within a single adjunct-NP which gets cross-referenced in the "b class," other (inanimate, etc.) nouns may not, unless they are all of the same gender, in which case the entire NP may be cross-referenced by an element of that gender.

Instead, to predicate the same thing of several objects, words for which are of various genders, one uses several short sentences with like verbs, instead of a single one involving a co-ordinate NP. Each verb is inflected for the class of its particular adjunct noun(s), e.g.,

ungalu	mininjani	banimbum	wininjani
'a beet-like tuber'	m-class ob. 'she put'	'a carrot-like tuber'	w-class ob. 'she put'

angari	inijani
'a yam-like tuber'	masc. ob. 'she put'

'She put down ungalu, banimbun, and angari' (three plants, as yet unidentified by me, but whose names are all of different genders)

Noun phrase types IVa, IVb, IVc, and IVd (of table 31) may all be subsumed under a more abstract type: the head-attribute construction. Here again, the principles of gender-number concord and linear juxtaposition both play a part, but for this construction the order in which elements are juxtaposed also becomes a significant factor.

The general principle, which is evident in the designation above, is that the attribute comes immediately after the head. The "modifier," that is, follows the "modified."

The degree of regularity with which this order is maintained varies among the different sub-types a-d.

The most rigidly ordered of the head-attribute constructions is

type a, which consists of a lexical noun plus one from among the two sets of gender-bearing pronouns given on pp. 45-46. When the pronoun is one of the first of those two sets (the "anaphoric" series) the order N-Det. is absolutely regular and inviolable. When the pronoun is a demonstrative, that order is very occasionally reversed.

Head attribute construction type IVb, since it involves a clausal constituent, will be discussed in a later section (sec. 3.3.1.1.1). It may be noted here, however, that the regularity of the ordering head-attribute for this NP type (in which the attribute is a clause) is quite high--second only to that of type IVa.

Phrase type IVc, in which the attribute is an adjective, is rather more flexible in its ordering. Usually the order is noun-adjective, but this is quite often reversed.

Examples of type IVc NPs are:

ganmaŋgu djomali

'yam' 'big'
'big yam'

ŋabun wuniyaŋari

'water' w-class + 'good'
'good water'

budu yali

'small' 'kangaroo'
'small kangaroo'

As seen above (p. 75), words for numbers in Uŋarinjin belong to the larger class of adjectives. But within that class, they have some special properties. A number greater than one can occur in what looks like a head-attribute construction with a head noun which refers to a

unique individual. When that happens, the meaning is "a group of this number of individuals one of whom is [N]."

For example:

Djunuri	medjeri
'Boab Tree' (man's nick-name)	'two'
'two people, one of whom is Djunuri'	

What is of interest about this particular construction is that it shows a strengthened ordering pattern. As adjectives, number words are usually permitted optionally to precede their head noun, even though they more often follow it, e.g.,

medjeri-yá	medjeri	wonay
'two' 'and'	'two'	'woman'
'four women'		

or: wonay medjeri-yá medjeri

But when numbers are used in the special somewhat idiomatic way discussed above, this optional permutability disappears: the number word can only follow the noun.

Thus, for instance, medjeri djunuri (cf. Djunuri medjeri, above) cannot occur except with the meaning "two boab trees'. To mean 'Djunuri and one other person', it must be: Djunuri medjeri.

Noun phrase type IVd, in which the attribute is a "possessor" noun phrase is the type for which the head-attribute ordering is least strongly specified. The extent to which that order is preferred varies depending on what kind of possessor NP comprises the attribute. (Indeed, for one kind of attribute, the reverse order is the normal one, as we shall see (p. 181).

A possessor noun or noun phrase may indicate possession in any of five different ways, four of which viz.: prefixation, suffixation,

independent possessive pronoun, and genitive postposition, have already been discussed and exemplified above (pp. 57-73, 95-99). It will suffice to point out here that, as can be seen in examples given above for each type, the possessor noun or NP more often than not comes immediately after the noun for the thing possessed.

The reverse is true of the fifth means of indicating possession. That means is one which was not discussed along with the others in the morphology chapter because it is entirely syntactic, viz.: simple juxtaposition. This construction actually serves as an alternative possessive phrase for one other type of possessive, namely the "human relationship" kind which is usually signalled by means of suffixation, as per sec. 2.1.5.2. For the set of "human relationship" terms, it is the otherwise "vocative" stem form which enters into such possessive juxtaposition. Other, non-suffixing words referring to similar sorts of relationships may also be juxtaposed, as in the last two examples below, giving somewhat broader possibilities for this kind of "possession" than exist for suffixation.

This juxtapositional possessive construction has invariable order possessor NP--possessed noun, i.e., the reverse of that which prevails for all of the other possessive constructions, and other kinds of head-attribute constructions as well.

For example:

marul djinda ṛambar

'grey-haired one' masc. proximal '(classificatory) mother-in-law'
'This old grey-haired man's mother in law'

njuŋan gaṇḍi

'you (sg.)' 'uncle' (MB, MFF, MBSS, et al.)
'your uncle'

Membinali gawila

(woman's name) 'little one'
'Membinali's child'

and even:

yali gawila

'kangaroo' 'little one'
'the kangaroo's joey'

3.1.3. The Syntax of Nominal Postposition

As explained in sec. 2.1.5.4.1, nominal postpositions are in syntactic constituency with noun phrases, occurring on the last word of the phrase which they "modify." This is true of all of the NP types discussed above. Examples for each type are:

I. ŋin - gu

'I' dat.
'to/for me'

Mawanjdjama - ṛa

'Mowanjam loc.
'at Mowanjum'

II. [[[mara njon] - ŋari] - gu
S S NP dat.
'see' 'he act on her'
'for the purpose of his seeing her' (cf. pp. 201-4)

III. [[[Mowaldjiyali] - á [Njera]] - yu
(man's name) lat.
'to Mowaldjiyali and Njera'

IVa. [[[dambun] [muno]] - walu
N DET prox.
NP 'Camp' m-class-distal
'hither from yon camp'

IVb. [[aṛi]N 'man' [woŋay njindi njumaŋa]S 'woman' fem.-anaphor 'he took her' - ŋari rel.]NP -yu lat.

'to the man who took that woman'

IVc. [[mayaṛa]N 'house' [djomali]ADJ 'big']NP - ṛa loc.

'at the big house'

IVd. [[dambun]N 'camp' [ŋinaŋga]1 sg. Possessive Pronoun]NP - ṛa loc.

'at my camp'

3.1.4. Abbreviated Head-Attribute Constructions

One thing which all the type IV or "head attribute" constructions have in common is that the head noun is sometimes only an "implicit" one. Thus, under certain conditions each of the last four NPs given immediately above can appear, in exactly the same meaning, with "deleted" head noun, as follows:

muno - walu

woŋay njindi njumaŋa-ŋari - yu

djomali - ṛa

ŋiniŋga - ṛa

It might be argued that these latter NPs are really of types I and II; that we needn't invoke the idea of "deletion" or "ellipsis" or claim that they involve any "implicit" head nouns, but should instead simply say that they involve constituents which, though not primary nouns, are used as nouns in these particular constructions. The problem with such an approach is that it provides no way of accounting for the fact that

every such "abbreviated" NP is of a certain grammatical gender, which is not always predictable from the overt form or semantic content of what appears overtly as the NP itself. The last three NPs above, for instance, (provided their meanings are those of their respective counterparts on pp. 182-83) are of the masculine, m-class, and m-class genders respectively, a fact which would usually be reflected in their clause-level relations of pronominal concord, but which is not predictable except by recourse to the deleted head nouns on p. 183, whose gender they share.

Given this evidence, I will assume that all such NPs arise from the "deletion" or "ellipsis" of a head noun, which remains as "implicit" or, if one prefers: "present in underlying structure."

3.2. The Simple Sentence

Having laid out the order-class structure of the Unarinjin verb in the last chapter (sec. 2.2), I have already laid out a microcosm of the Unarinjin simple sentence. For, as we have seen, the finite verbal word contains pronominal elements which cross-reference all of the major grammatical adjunct NPs which, together with that verb, comprise a simple sentence.

The adjunct types themselves and their characteristic semantic relationships to the verb call for some comment here.

The occurring cross-referenced adjunct configurations may be divided into two types, the selection between them being determined by the choice of verb root.

In the first configuration, which occurs with "intransitive" roots, there is one obligatory adjunct, the "subject," which is cross-referenced in order class 5, and another, optional "oblique" adjunct which is cross-referenced in order classes 15 and 16.

Semantically, the relationships which may hold between the verb and each of these adjuncts may vary considerably. As discussed on p. 154, the subject may be stative or active. Within the latter class, the subject may even be a semantic agent, in which case the optional oblique adjunct, if present, is a patient, e.g.,

gundi-naŋga ŋur njumaṛanaŋga woŋay
'husband-3 sg. poss. 'hit' fem. sub. -$\sqrt{ma}$-past-3 sg. d.b.'woman'
'The woman hit her husband'

For intransitive verbs, the subject may even be a semantic patient, e.g.,

bagid di yora waŋga
'bucket' w-class 'fill' w-class sub.-$\sqrt{a}$ - past
'That bucket was filled'

Although the semantic relationship of adjunct to verb is quite variable, the "ranking" of one adjunct with respect to the other remains constant. That is, the oblique adjunct is always in a more "peripheral" relationship to the verb than is the subject. Thus, in the next-to-last example above, the subject is an agent and the oblique adjunct a patient. But in the last example, since the subject is a patient, the oblique adjunct, if there were one, could not be a patient (and certainly not an agent), but would instead be a "benefactive" NP, referring to someone on whose behalf the bucket was filled.

The second of the two cross-referenced adjunct configurations is the one which occurs with "transitive" roots. In this configuration, there are two obligatory adjuncts: a subject NP which is cross-referenced in order class 5, and an object NP which is cross-referenced in order class 4. In addition, there may be another oblique adjunct, which is cross-referenced

in order classes 15 and 16, just as in the intransitive configuration.

Probably just because there are more grammatical adjunct positions available within this transitive configuration, the semantic relations between the verb and each of them are more narrowly circumscribed than was seen to be the case for the "intransitive" configuration described above.

The subject NP in this configuration is always active (as opposed to stative or patient) and almost always an agent. The only major class of transitive verbs for which the subject is non-agentive consists of the simple transitive verb √(ṛ)a 'to go to', together with most of the compound verbs which take this root as an auxiliary (see example on p. 158).

The obligatory object adjunct in this configuration is usually a semantic patient. The alignment between transitive object and semantic patient is, however, sometimes overridden by another kind of alignment which tends to be maintained in Uṇarinjin.

The other kind of alignment is one which arises from a general tendency to favor, for verbal cross-reference, NPs which are highly ranked on the hierarchy of NP types which was exemplified above (see pp. 95ff.). This is true of all of the adjunct positions of the transitive configuration, including the obligatory object adjunct. What this means is that some verbs which we might expect to be three-place predicates, such as the rough equivalents of English "give" and "show," while they do take an agent NP in the subject position, do <u>not</u> take a patient NP in the object position, since the patients of such verbs are typically inanimate objects, which come at the bottom of the hierarchy. Such verbs instead take, in the object position, an adjunct NP referring

to the entity to whom something is given or shown, which is much more likely to be a hierarchically high-ranking, human noun. The NP referring to the thing given or shown (if one is present), is not cross-referenced, but occupies the "Oblique II" position (for which, see below, pp. 188-90).

For examples of 'give' sentences of this kind (for which the root is √ŋulu, which is best glossed as 'give to'), see pp. 198, 223.

An example involving the 'show' root, √miyimbu (which is best glossed 'show to') is:

wonay njumiyimbunjiri garagi

'woman' fem.-3 sg.- 'show to' - pres. cont. 'bark bucket'
'He is showing the bark bucket to the woman'

The third, optional adjunct in this transitive configuration is cross-referenced with the same form and order classes as used for the second, optional adjunct in the intransitive configuration. But within the transitive configuration, this third, suffixally cross-referenced adjunct is never a patient, but instead is usually a "benefactive" NP of the kind discussed on pp. 148ff.

3.2.1. Linear Order of Major Sentence Constituents

Grammatical adjunct relations in Ŋarinjin are signalled mainly by means of pronominal cross-reference within the system of order classes discussed in the last chapter. But the ordering of the NP constituents themselves does seem to be governed, albeit very loosely, by certain norms having to do with adjunct relations, so that word order has a kind of secondary reinforcing effect on the system of verb-internal order classes.

The reason why word order can only play a secondary part in the signalling of these relations (which is also the reason why it would be difficult to undertake a statistical investigation into the question) is that in the vast majority of naturally occurring Unarinjin sentences, one or more of the NPs cross-referenced in the verb is not overtly present within that sentence except in the form of its pronominal manifestation within the verb. It is obvious why this should be so in the case of the personal pronominal categories: the verbal "cross-referencing" elements carry just as much lexical specificity as the corresponding free-standing pronouns (sec. 2.1.1). For non-participant or "third person" NPs, the elaborate differentiation of form classes by gender and number greatly facilitates the maintenance of pronominal reference over multi-sentence stretches of discourse, obviating the need for repetition of the NPs themselves (even in "abbreviated" form) within successive sentences (cf. Heath 1975, and Rumsey, forthcoming, pp. 42-44).

As far as I have been able to determine, the ordering norms, in order of strength, are as follows:

1) In the transitive configuration, the object NP precedes the verb.

2) In the intransitive configuration the subject NP precedes the verb.

3) In the transitive configuration, the subject NP follows the verb.

If there is any norm governing the linear placement of the optional dative-benefactive constituent which is cross-referenced by pronominal suffixes, I have not been able to discern it.

3.2.2. The "Oblique II" Adjunct

In addition to the verbally cross-referenced adjunct types discussed

above, there is another, somewhat nebulous type which is formally identifiable mainly on negative grounds: it is an NP which is neither cross-referenced on the verb nor marked by a postposition for any kind of "adverbial" function. Such NPs are usually of low rank on the nominal hierarchy (pp. 95ff.). Semantically, they seem usually to be patients or to bear a kind of quasi-instrumental relationship to the verb.

We have already seen one instance of this type of adjunct, in the "show" example on p. 187, where the thing shown is an oblique II patient. "Things given," which are oblique II adjuncts within the ŋulu ('give') clause, are perhaps semantically intermediate between patients and instruments, √ŋulu being glossable as 'to begift by means of'.

For the more common kind of transitive verb which cross-references inanimate NPs in the object position, the oblique II adjunct is usually more straightforwardly "instrumental"; e.g.,

Oblique II			Object	
winjdjaŋun	wog	andon	ŋala	biri
'fire'	'cook'	collective-3 sg. -pres.	'meat'	'that (b class)'

'He cooks that meat with a fire'

When the verb is intransitive, the oblique II adjunct is usually a semantic patient; e.g.,

me	wog	ba	gaŋaŋgan
'food'	'cook'	imperative - √a	'now'

'Cook some food now!'

minjdjal	budmaṛa		gowana	njindi
'eat'	3 pl. √ma -	'past'	'goanna'	'that' (fem.)

'They ate that goanna'

As mentioned above, there is a tendency to favor for cross-reference, in all order classes, NPs which are relatively highly ranked on the lexical

hierarchy. Thus, although the semantic patient of an intransitive verb is usually cross-referenced by a pronominal suffix if the patient is human (as in the example on p. 185), lower-ranking patients are usually non-cross-referenced "oblique II" adjuncts, as in these last two examples.

3.3. Complex Sentences

3.3.1. Subordinate Clauses

3.3.1.1. The -ŋari Clause

In a position immediately following order class 16, any finite verb except an imperative one may take the suffix -ŋari. An important difference between the way -ŋari is used on finite verbs and the way it is used elsewhere (as per sec. 2.6.4.8) is that just on finite verbs, the suffix is in constituency not just with the word on which it occurs, but with a larger structural unit of which that word is a part. That unit is the sentence, which is thereby transformed into a subordinate clause. In other words, -ŋari, when suffixed to a finite verb, marks that verb, together with all the words with which it would otherwise comprise a sentence, as a subordinate clause.

The range of functions served by the -ŋari clause is (from an Anglo-centric point of view anyway) extremely broad and diverse. Possible syntactic/semantic functions of a subordinate -ŋari clause in some matrix sentence (or some part of it) are listed in table 32.

Although the form of the subordinate clause itself (or, in Chomskyan terms, the "structural change" by which it is derived) is identical for all these functions, its positioning with respect to other elements of the matrix sentence varies in fairly close accord with its syntactic-semantic function. These ordering norms are detailed immediately below table 32, along with examples of each of the various functions served by

TABLE 32

-ŋARI CLAUSE TYPES

Nominal and Adnominal	Adverbial
1) Relative Clause:	1) locative clause
a. with overt head noun	2) temporal clause
b. without overt head noun	3) causal clause
2) -ŋari clause as sentential adjunct of matrix verb	4) antecedent clause of conditional sentence

the -ŋari clause (instances of which are set off in the examples by brackets).

3.3.1.1.1. Nominal and Adnominal Uses

I label "relative" those instances of the -ŋari clause in which it functions as an adnominal modifier, forming a type IVb head-attribute NP (p. 176). When it occurs in this function, the -ŋari clause usually comes right after the matrix-level nominal constituent which it modifies, e.g.,

1) gundondo biri [njarun linj banjirwuni-ŋari wunan]

'half way people' 'those' 'we' 'look we acted on them'-rel.

bedja budju burinji

'already' 'finished' 'they have been'

'Those halfway people to whom we looked in the wunan (i.e., from whom we regularly received sacred objects) have already become extinct'

2) badmiyangara buna [gi bundon-ŋari]

'we recognized' 'these' 'totemize' 'they act on them'-rel.

'We recognized these (plants, animals, objects, etc.) which they totemize'

3) ari djinda [anunulanara - ŋari djubago biri]

'man' 'that' 'I gave to him' - rel. 'tobacco' 'it'

bedja balja amara

'leave' 'he did'

'That man to whom I gave tobacco has left'

4) gunja ama malŋari djiri [wanala anga - ŋari]

'what' 'he do' 'white man' 'he' 'crazy' 'he went' - rel.

djiri [yilala gad andoni - ŋari]

'he' 'children' 'abandon' 'he acted on them' - rel.

'What is the white man doing who went crazy and abandoned his children?'

5) djoli eyalu belewalu wundumaŋgu

'come back' 'it is'-prox. 'back'-prox. (name of hole in creek)

[djebara njarwiljani - na - ŋari]

'emu' 'we speared her' pauc. - rel.

'It comes back here to Wundumangu, where we speared an emu'

6) brru [wulan wudiŋanjiri -ŋari] mara gara

'(Aboriginal) men' 'word' 'they are putting it'-rel. 'find' 'maybe'

wurgo mulimuli - ra

'they might do to it' 'paper' - loc.

'The (Aboriginal) men who are setting down words (on tape) might find them on paper'

One thing demonstrated here (in the fourth example) is that more than one -ŋari clause may modify the same noun.

Note also that "relativization" by means of -ŋari is not sensitive to the syntactic function of the relativized NP in the matrix sentence, nor to that of its coreferential counterpart in the-ŋari clause, nor to the relationship between the two. In 1) and 3), the noun common to the matrix sentence and the -ŋari clause is one which functions as an intransitive subject in the former and as a transitive object in the latter. In 2), it is a transitive object in both. In 4), it is an intransitive subject in the matrix sentence and in the first -ŋari clause, and transitive subject in the second. In 5, it is an oblique II (non-cross-referenced) object in the matrix and a direct object in the -ŋari clause and in 6), it is a transitive subject in both. I point all of this out because Uŋarinjin differs sharply in this regard from other Australian languages, such as Dyirbal (Dixon 1972, pp. 99ff.), Yidinj (Dixon 1977, pp. 385ff.) and Ngayamil (Schebeck 1976, pp. 523ff.), which restrict relativization to NPs in certain (derived) case functions. (E.g., both must be in absolutive case, etc.). Hence, unlike in those languages the pattern of relative clause formation in Uŋarinjin does not characterize its syntax as "ergative" or "accusative." (But see Rumsey forthcoming, p. 33 for another kind of argument on this question.)

The one restriction which does apply is that the coreferent NP in the subordinate clause must be one which is cross-referenced on the verb in that clause (though not necessarily on the verb in the higher clause). This fact does not support any claim regarding "ergativity" or "accusativity," but it does testify to the syntatic centrality of just those adjunct types which are cross-referenced on the verb. (Cf. Keenan and Comrie 1977.)

Often the -ŋari clause occurs without an accompanying head noun. Most such non-adnominal -ŋari clauses are what I call "adverbial" clauses

(see sec. 3.3.1.1.2). But some of them instead function as "abbreviated" noun phrases (cf. pp. 183-84) in the matrix sentence, e.g.,

bedja angga [anulowani - ŋari]

'already' 'he went' 'I feared him' - rel.
'The one whom I feared has already gone'

baridj njadeŋga yangu [we - ŋari] - ṛa

'rise' 'we did'-ref. 'water-lily' 'it is'- rel. - loc.
'We rose up against each other (at the place) where the water lilies are'

In the first of these two examples, the -ŋari clause functions as a masculine noun, which, as the subject of the verb, is cross-referenced with a pronominal element showing its gender. One might, then, claim that the -ŋari clause here, if it lacks an overt head noun, does have an overt "head" in the form of that pronominal element. But the second example shows that it is not always so. There the -ŋari clause functions as a noun which takes the locative postposition -ṛa, specifying the location where the action described by the main verb took place, but without even a pronominal element on the verb to serve as its overt "head." Nonetheless, I would insist, for the reasons given in sec. 3.1.4, that these are still relative clauses, and can most easily be accounted for by assuming an "implicit" head noun.

But there are other nominal uses of the -ŋari clause in which there is no implicit head noun outside of the clause itself. These are instances in which the whole proposition conveyed by the -ŋari clause serves as one of the arguments of the matrix-level predicate. In these instances the -ŋari clause really does function as a complete nominal constituent of the matrix sentence (in "deep" as well as "surface" structure). Evidence for this assertion is provided by the fact that the -ŋari

clause in this function does not vary in gender to agree with that of some deleted head noun, but instead bears gender inherently: all -ŋari clauses of this kind behave as "things" of the w-class neuter gender.

For example:

wa wuḷal wuŋge [ŋabun goydj ŋaya - ŋari]

'not' 'nice'(w-class) 'it isn't''alcohol''drink' 'we go'
'For us to drink grog is not nice'
or: 'It's not nice for us to drink grog'

widjiga waḍa windjonjiri

'Is it the case?' 'like' 'you acting on it' (w-class)

[wana njingebu - ŋari]

'if' 'I will send you'
'Do you like (the idea of) my sending you?'

Grammatical orthodoxy would dictate that the w-class pronominal element which appears on these verbs be interpreted as a "dummy" element, like the English word "it" in my gloss for the first of these two examples (cf., for instance, Heath 1975, p. 100). But such an interpretation would not be consistent with the Ngaṛinjin ideology of linguistic (inter) action. For the traditional Uŋaṛinjin speaker, words do not merely represent things, they <u>are</u> things. More specifically, they are things of the w-class (cf. p. 56). So when one skips to the meta-linguistic level, as one must in order to point to propositions, one enters one of the semantic domains of the w-class. As means of referring to streches of discourse, the w-class pronominal elements are no emptier semantically than are gender-bearing demonstrative pronouns in their application to the non-linguistic context of the speech act. My suspicion is that Uŋaṛinjin is not really very unusual in this regard. Many of the so called "dummy" elements of other languages too will probably begin to speak in interesting and

unexpected ways once we develop a theory of language which allows the grammarian to shift back and forth between language and meta-language as easily as the native speakers do.

3.3.1.1.2. Adverbial Uses

3.3.1.1.2.1. Locative. I am somewhat hesitant about including "locative" as a distinct adverbial use of the -ŋari clause because it may be better to consider all apparent instances of this type as, instead, headless relative clauses which are adnominal to an implicit (deleted) noun or pronoun of place (e.g., munda, pp. 46, 54 above). The reason I am not certain of this is that semantically locative -ŋari clauses often occur without case postpositions (ṛa, y_1u, gu, etc.) in positions where a noun phrase would demand one. This suggests to me that such clauses are interpreted, on the model provided by the uses discussed below, as inherently "adverbial" and therefore not in need of any adverbial case postposition to mark them as such.

Examples of -ŋari clauses used in this way are:

Larry medjeri banjidmindani [djaŋalaŋala e-ŋari]

'two' 'we took them' (man's name) 'he is'
'We picked up Larry and another man at the place where Djaŋalaŋala died'

ada burwani [dowar waŋga - ŋari]

'sit' 'they did' 'break' 'it went'
'They sat down (at the place) where it (the mail plane) broke down'

A noun phrase occurring in place of either of these -ŋari clauses (even a noun phrase of type IVb or its "abbreviated" counterpart) would require the locative postposition -ṛa.

3.3.1.1.2.2. Temporal. Moving now to its more properly adverbial (or perhaps ad-sentential) uses, we may isolate one kind of -ŋari clause whose relationship to the matrix sentence is one of temporal specification. As far as I have been able to discover, Hale's generalization for Australian languages (Hale 1976, p. 79), that this "temporal interpretation" is posssible when the main and subordinate clause "make identical time reference," holds true for Uŋarinjin,[1] but only after a certain adjustment. The phrase "make identical time reference" must be replaced by: "contain verbs which are marked for the same tense, with imperative mode to be taken as implying present tense." This alteration is necessary because temporal -ŋari clauses, although they match the main clause in grammatical tense, do not always "make identical time reference." There are two ways in which they behave otherwise. The first is one which also seems to be true of the Walbiri data which Hale presents in support of his generalization (op. cit., pp. 79ff.), which means that some refinements are in order even with respect to Walbiri. The problem, it seems, is that adequate account was not taken of the effect of aspect on "time reference." In some of Hale's examples, as in my last example below (p. 198), the temporal clause refers to an ongoing action whose duration includes the beginning and endpoint of the action described in the main clause, but extends beyond it in one or both directions. Such pairs of verbs may be of the same tense, but certainly do not make "identical time reference."

The second way in which Uŋarinjin temporal clauses violate Hale's formulation is that, even where the tense and aspect of the subordinate

---

[1]Hale does not make it clear whether this is an "if and only if" condition or only an "if" one. In Uŋarinjin, it seems to be the former.

and main clauses are both identical, the temporal relationship between the two may be one of sequentiality rather than simultaneity. When the -ŋari clause carries this particular sense, it is usually accompanied by di 'then' or di-yu 'after that' occurring as a temporal specifier in the main clause, as in the first three examples below.

Examples of the "temporal" -ŋari clause occur in the following sentences:

[budju ama - ŋari], di - yu balu

'finish' 'he does' 'after that' 'come here'
'Come here when he has finished'

[garagi yora waŋga-ŋari] di - yu banjirŋulini

'bucket''fill' 'it went' 'after that' 'we gave to them'
'When the bucket had been filled, we gave it to them'

[yilidj ay e - ŋari] di djaṛi aŋon

'rainy weather' 'none''it is' 'then''leave''I act on him'
'I'll leave him when the rainy weather has ended'

[andu djina ŋulan ŋadma - ŋari] ŋulan ama njele

'he''that one' 'move' 'we do' 'move' 'he does' 'also'
'When we move, he moves too'

[malga njadmaṛa -ŋari], mindjal birinji

'dance' 'we did' 'eat' 'they did'
'While we danced, they ate'

[burwiljeŋgeri - ŋari] debar aŋga

'they were spearing each other' 'die' 'he went'
'He died during the course of their throwing spears at one another'

3.3.1.1.2.3. Causal Clause. Sometimes the relationship between the statement made by -ŋari clause and that of its matrix sentence is to

be understood as one of cause and effect. "Causal" -ŋari clauses resemble temporal ones in that they almost always occur before the matrix-level verb, and in that the latter is often accompanied by the word di. In instances where the causal clause shares the other characteristic diagnostic of temporal clauses, i.e., that the tense of its verb matches that of the matrix verb, both the temporal and the causal readings are usually possible. Indeed, it may be unrealistic even to distinguish two readings, the principle: "Post hoc, ergo propter hoc" being assumed valid by Uŋaṛinjin speakers as often as it is by the rest of us. Not all causal clauses are ambiguous in this way, because not all of them match their matrix sentences in verb tense.

Examples of sentences including -ŋari clauses which can or must be interpreted as causal are:

[waḍa njoni - ŋari], di bedja ŋayanja amaṛa

'like' 'he acted on her' 'all right, let's go' 'he said'

'Because he liked her he agreed to go'

[duramaḷa balja aṇalu-ŋari] yaydji awani

'black cockatoo' 'come' 'she came to him' 'happy' 'he fell'

'Because (or when) the black cockatoo came to him, he was happy'

[ŋala buna budju

'meat' 'that' (b-class) 'finish'

andoni - ŋari aniŋgen-ŋa] bunda ŋala mindjal madi

'he acted on it''himself only' 'that'(b-class) 'meat''eat''also'

ŋadi

'we do'

'Because he finished that meat all by himself, we eat meat too'

3.3.1.1.2.4. The -ŋari clause in conditional sentences. The Unarinjin conditional construction calls for a -ŋari clause as the antecedent, which precedes the main clause, which in this case carries the consequent of the conditional. Often the -ŋari clause when used with this function takes on a clause-initial particle wana or budju. Between these two particles, I have been able to discover no difference in meaning (which is not to say that there is none). The latter, budju, is probably akin to (though not to be identified with) a homophonous verbal particle which means "finish" (which occurs in the last example above). Counter-factual conditional sentences, as one might expect, have an irrealis verb in the antecedent clause, as in the last example below.

Examples of conditional sentences including -ŋari clauses are:

[yaw amara- ŋari] djari aŋon-dali di

'yes''he says to me' 'leave' 'I act on him--'indeed' 'then'
'If he says yes to me, I'll surely leave him'

[budju moduga dar uma-ŋari] balja ŋima

'if' 'car' 'stand''it does' 'go' 'I will do'
'If the car is ready, I will go'

[budju wada wiŋdjon-ŋari] mawingi yawun di balu

'if' 'like' 'you act on it''cold weather-time''then''come'
'Come during the cold season if you like'

[wana gayilan umulu wira-ŋari] , di- yali

'If/when' 'back' 'well''it will be to me' 'then' 'indeed'

balu ŋumanu

'come' 'I say to you'
'If and when my back gets better, I'll tell you to come'

[wana guraḍ ŋarguwari-ŋari yawuṛe], wanjdjuṇa mindi- yali

'If' 'cross' 'we 2 fall' 'Boimie Creek' 'there' 'indeed'

djoy e

'proper' 'he is'

'If you and I cross Boimie Creek, there will be a proper Wanjdjuna right there'

[galambi mindjal - ŋa iŋgini - ŋari], aminjdjen

'white egret' 'eat' -'only''he didn't 'his anus'

awaṛay iŋgiŋi

'one is lacking' 'he would have been'

'If only the white egret hadn't eaten, he wouldn't have an anus'

Sometimes the idea conveyed by counterfactual conditional sentences such as the last example above is conveyed without the use of a -ŋari clause, by a simple "paratactic" sequence of irrealis clauses, antecedent followed by consequent, e.g.,

winjdjaŋun ganda ŋabun - da uŋgureŋi - yali

'fire' 'that' 'water' - loc. 'it had been'

buramaḷar bura alji muna burgiŋi - yali

'people of amaḷar moity' 'down' 'there''they would have been'

'If fire had really been under water, people of the amalar moity would indeed have been down there'

3.3.1.2. The -gu Clause

The element -gu is one which occurs as a nominal postposition meaning 'to, for, for the purpose of', as per sec. 2.1.5.4.3.5. Unlike the other nominal postpositions, -gu (or a homophonous suffix with a very similar meaning) can also occur on verbal particles, forming a relatively impoverished sort of intentional clause.

For example:

ada amaṛa [goidj - gu]

'sit' 'he did' 'drink'
'He sat down to drink'

ganda ṛargi wuniya - ŋari di [lindidj-gu]

'that' 'rock' 'good' 'one' 'it' 'pressure-flake'
'That's a good rock for pressure flaking'

maṇa maṇaŋari biyiŋgalu [li - gu]

'quickly' 'they came' 'watch'
'They came quickly in order to watch'

These -gu clauses, if they can be called clauses, are "impoverished" ones insofar as they contain none of the specification of a finite verb, nor any of the other trappings of a full Uŋaṛinjin sentence. The -gu clause contrasts strikingly in this regard with the -ŋari clause (above, sec. 3.3.1.1), and the √ma complement clause (sec. 3.3.1.3), both of which contain everything a full sentence does. In a transformational account this contrast would probably be regarded as a matter of surface structure, with the -gu clauses being derived, just as the other kinds, from underlying sentences containing a subject, a verb, and sometimes an object. Such a derivation would have to be restricted so as to be possible only when the subject of the matrix clause is coreferential with the subject or object of the sentence underlying the -gu clause. Also required is a restriction to the effect that the sentence underlying the -gu clause must contain a compound verb as opposed to a simple one. The only part of the compound verb which is present in surface structure is, of course, the verbal particle (sometimes suffixed with the iterative aspect marker $-w_1a$). Since most verbal particles may occur with any of

several auxiliaries, the absence of an auxiliary in surface structure decreases specificity with respect not only to subject and object, but also regarding the semantic subcategorization of the verb itself (as per pp. 154ff.).

Both of these kinds of ambiguity can be circumvented by the use of a somewhat different purposive construction which, as far as I know, is a permissible alternative to the -gu clause in every context in which the latter occurs. This alternative construction also involves the use of the morpheme -gu, but not on the verbal particle. Instead, it is added to a finite verb which has first been suffixed with -ŋari, turning the whole sentence with which it appears into a nominalized clause. This clause with -ŋari]-gu] suffixed to its finite verb serves the same adverbial, purposive function as the [verbal particle + gu] clause, but includes all the information of a full sentence.

For example:

bora aŋga [[maṛa njon - ŋari] - gu]
'long way' 'he went' 'see' 'he act on her'
'He went a long way in order to see her'

djoli eŋilu [[wuḷa ŋadon - ŋari] - gu]
'return' 'let him be' 'talk' 'he act on us'
'Let him come back so he can tell us'

ŋuṛu bi , [[layburu njindi - ŋari] - gu]
'listen' 'be (imp.)' 'know' 'you be'
'Listen so that you may know'

I put double brackets around these clauses, indicating an embedding of a -ŋari constituent in the -gu constituent, because I regard this -gu as the nominal postposition -gu (sec. 2.1.5.4.3.5). These -ŋari

clauses then, are not in themselves of the adverbial sort, but rather are type II nominal constituents which here are rendered adverbial by the use of an adverbial case postposition. There is nothing very surprising about this, as the -ŋari clause often functions exactly like a noun, in which function it may take any of the other nominal case postpositions as well. What may at first seem surprising, given the increment in specificity of the -ŋari] + gu] clause over the -gu clause is that the former is actually far less commonly used than the latter. But this becomes more understandable when one realizes that the -gu clause, although potentially ambiguous regarding subject and object, is, in vivo, seldom ambiguous in this regard, partly because of the effect of its associated restrictions on subject-object-coreference (as per p. 202), acting in combination with universal principles of lexical hierarchy.

3.3.1.3. The √ma Complement Clause

The √ma complement clause is a ubiquitous construction type in Uŋarinjin--one which, like the -ŋari clause, serves a wide range of functions, some, but not all of which, can be distinguished from each other on syntactic grounds.

The distinguishing characteristic which is common to the √ma complement clause in all its functions is that it is "framed" by the presence, in its matrix sentence, of some form of the verb √ma, which always comes immediately after the clause in question.

The verb √ma, let us recall (pp. 109, 155) is a morphologically intransitive one which means something like 'do'. In the ideal semantic system which I have claimed lies behind the pairing of auxiliaries with verbal particles, √ma is the least marked of the intransitive auxiliaries,

specifying only "active" as opposed to stative. One of the kinds of verbal particles with which it is characteristically paired is the class of verba dicendi. The following particles, for instance, all form compound verbs with √ma as their most common auxiliary: wuḷa, 'to talk', bara 'to discourse', burgaydj, 'to question', ŋayag 'to request', yerol 'to yell'. But none of the resulting compound verbs ever serves as a framing verb for a clause representing that which is, was, or will be said. The only verb which ever does so is the verb √ma by itself. But √ma, outside of its use in this construction, never occurs without an accompanying verbal particle. It is therefore tempting to think of the [reported speech + √ma verb] construction as a special kind of compound verb, with √ma functioning as an auxiliary rather than as a simple verb. The choice of √ma as the particular auxiliary which is used in these "compounds" is motivated by its association with verbs of saying. It can be argued in support of this compound verb analogy that the "reported speech" clause behaves more like a verbal particle than like an adjunct (e.g., object) to the framing verb: unlike some kinds of -ŋari clause (pp. 194-95), the reported speech clause is never cross-referenced.

But this way of thinking about the matter is one which should not be pushed too far. After all, the reported speech clause is a fortiori, a clause, however much it may behave like an element of a compound verb.

In order to understand what kind of clause it is, one must bear in mind the following fact: there is no formal distinction in Uŋarinjin between direct and indirect discourse; between "oratio recta" and "oratio obliqua." (Indeed, the formal means by which both of these functions are (identically) executed are used for other functions as well, but for now

I limit the discussion to "reported speech.") When speech is reported (or "reported on"), it is reported directly as though it were being quoted. All the indexical categories; person, tense, spatial deixis and so on, are implemented exactly as they were, or would be, within the speech situation of the reported utterance, just as is true of direct discourse in languages which distinguish it from indirect discourse. But it would be a mistake to say that Unarinjin "has direct discourse and lacks indirect." Rather, I must insist on my formulation to the effect that what it lacks is a distinction between the two. In languages which do make such a distinction, the use of direct discourse entails that the utterance included within the quotation frame corresponds word-for-word with the utterance being reported.[1] But the use of the "reported speech" $\sqrt{ma}$ complement clause in Unarinjin carries no such implication. Therefore it is neither direct nor indirect discourse, but something different from either: different because there is no other term to which it is opposed.

Examples of sentences including "reported speech" $\sqrt{ma}$ complement clauses are:

[badi wiɲi] budma

'abandoned' w-class- $\sqrt{y_2 i}$ - opt. 3 pl. - $\sqrt{ma}$
'"Let it be abandoned", they say' or 'They decide to abandon it'

[njaɲan - ŋa balja buma] budmeɲanga

'you' -'only' 'go away' imp.-$\sqrt{ma}$ 3 pl. - $\sqrt{ma}$, - past-3 sg. d.b.
'"You go away", they told him' or 'They told him to go away'

---

[1] See Partee 1974 for some ways in which this fact causes problems for the traditional extensionist truth-functionally based approach to semantic representation; problems which, as far as I can see, do not arise in dealing with languages, such as Unarinjin, which do not distinguish between direct and indirect discourse.

[munda ada ŋameri] amaṛa

'here' 'stay' 1 sg. - √ma - cont. masc.- √ma - past
'He said, "I'm staying here"' or 'He said he was staying there' (or 'here' if the place of the reported speech is the same as the place at which it is being reported)

[ŋala waḍa-ga binjdjon] ŋamenaŋga

'meat' 'like'-int. b-class-2 sg. -√w_1u- pres. 1 sg.-√ma-past 3 sg. d.b.
'"Would you like some meat?", I said to him' or 'I asked him if he would like some meat'

[[guyialu] njadmeṇḍu] amaṛeṛa

2 pl. -√a - prox. 3 pl. ex. -√ma - past - 3 pl. d.b. masc.-√ma -past 1 sg. d.b.

'""Come", we said to them", he said to me' or 'He told me that they told them to come' or 'He told me that they said "come" to them' or . . .

In my free translations for the examples above, I have glossed √ma as 'say' strictly for the sake of us in whose culture there is a strict separation in principle between "saying" and "doing"; between "mere words" and "action." But, given the Ngaṛinjin way of looking at the matter, this gloss is overly explicit. For the Ngaṛinjin, speech is a form of action, perhaps its most salient form. Accordingly, the verb √ma in all its uses, including the framing of reported speech clauses discussed above, is most appropriately glossed 'do'. There is nothing in the matrix sentence of such a clause which indicates overtly that speech is the particular form of action which it predicates. Where the tense-mood of the verb in the clause framed by √ma is anything but future, the mere fact that there is something other than a verbal particle occurring before √ma is enough to make it clear that speech is what is predicated. But when the clause contains a future verb, as discussed below (pp. 208ff.), the kind of action at issue may or may not be speech.

One can, however, specify that it <u>is</u> speech in such cases, or one can specify what <u>kind</u> of speech it is (within the Ngaṛinjin classification of speech acts indicated by the terms listed on p. 205). To do so, one uses a "paratactic" construction consisting of two separate sentences, one (usually the first) of which specifies the nature of the speech act and the other of which reports (on) it with √ma as a framing verb.

For example:

burgaydj budmaṛa ṇjaṉan ṇjangi budmenaṉga

'question'3 pl.-√ma- past 'you' 'who?' 3 pl.- √ma-past -3 sg.d.b.

'"Who are you?' they asked' or 'They asked him who he was'

wuḷa njumeri [djagaḷ ṉiwa] njumaṛeri

'talk' fem.- √ma - past-cont. 'swim' 1 sg.-fut.-√wa fem.√ma-past -cont.

'She was saying that she would go swimming' or 'She was saying: "I will (want to) go swimming"'

Where the verb in the clause framed by √ma is a "future" one, as in the second sentence of the last example above, that which is reported may be something other than speech, namely: 1) intentionality or 2) causation.[1]

In Uṉaṛinjin 1) and 2) are predicated in exactly the same way (both of them resembling a form of reported speech). In order to understand how this is done, and how the construction by which it is done sometimes differs from the reported speech construction, it is necessary to raise some points regarding cross-clause coreference and person agreement.

Recall first that within a reported speech clause, all indexical categories are treated as though the speech situation of the reported

---

[1]That is, 'X made Y do Z'. This is not to be confused with the <u>causal</u> nexus of the -ṉari clause (sec. 3.3.1.1.2.3), which instead glosses as 'P because Q'.

utterance were being re-created, just as is true of direct quotation in languages which distinguish it from indirect. For purposes of person marking within that clause, "ego" is the speaker of that reported speech, regardless of whether or not that same person is the one doing the reporting. Likewise "tu" or "addressee" is the addressee within the reported speech event, but not necessarily within the reporting event, and 3rd person or "non-participant" is only specified as such for the reported speech event, and may in fact be a participant in the reporting event. There is, then, no cross-clause relationship of co-referentiality carried by the mere presence or absence of identical person features in the embedded clause and its matrix sentence.

But there are regularities of cross-clause coreference for √ma clauses of all kinds. These exist, not with respect to person features alone, but in the interaction of person and adjunct status. The rule for reported speech clauses (cf. Pike and Lowe, 1969, pp. 87ff.) is that the subject of the framing verb has the same reference as any (+ ego) form(s) occurring in the clause it frames, and its "object" (i.e., the adjunct cross-referenced by its pronominal suffix, if any occurs) has the same reference as any (+ tu) form(s) occurring in that clause. (Where such personal pronominal forms in the reported speech clause are grammatically non-singular, the reference of the matrix subject and object is "included" (or "excluded") according to the features +/- ego and +/- tu respectively). These patterns of coreference follow automatically from the existence of a framing verb of saying which takes the speaker as its subject (or "agent") and addressee as its object (or "patient"). To the extent that the existence of such verbs is a linguistic universal, it follows that these patterns are also universal.

The reason I have gone into these facts is that they provide one basis for a formal distinction between the reported speech √ma construction and the causative-intentional one. The rule regarding the subject of √ma is the same for both: among the NPs in the subordinate clause, it can share reference only with those which are specified as (+ ego). But with respect to the object of √ma, there is an important difference between these two constructions: while the feature specification which determines coreference with it in reported speech clauses is (+ tu), in causative-intentional clauses it is (- ego). Thus, while "third person" or "non-participant" NPs in reported speech clauses are excluded from coreference with the matrix object, they regularly enter into such a relationship when they occur within causative-intentional clauses. Indeed, "non-participant" noun phrases are perhaps the only kind which ever enter into such a relationship, for there seems to be a prohibition against the occurrence of (+ tu) forms within the √ma-framed subordinate clause of a causative-intentional sentence (which, given the identification of (+ ego) forms with the matrix subject, leaves only the (-ego, -tu) or "third person" forms as potentially coreferential with its object). These two interrelated characteristics--coreference of matrix object with subordinate (- ego) NPs rather than (+ tu) ones, and the non-occurrence of the latter --allow us, if we take reference as "given," to distinguish the causative-intentional construction from the reported speech ones if an object is specified for √ma.

I now proceed to an exemplification of the causative-intentional construction with explicit object. Recall that a necessary (though not sufficient) condition for interpreting any clause as a causative-intentional complement is that its verb be in the "future tense." As a first gloss for

each of these examples I give a "literal" one which, I hope, brings out the underlying sense which allows this construction to serve as both a causative and an intentional one, and also shows its close affiliation with the "reported speech" clause:

[wuḷan wurumiyaŋga] budmaraŋarugu

'word' 2-class-3 pl. - fut- √miyaŋga 'know' 3 pl. -√ma-past-1 pl.irr. d.b.

'"They$_i$ will know this word," they did with regard to us$_i$' or 'They wanted us to know that word' or 'They made us know that word'

[djinda madnaŋga me njuŋuḷu] ŋamerinu

'that one' 'his wife' 'food' fem.-3sg.-fut.-√ŋuḷu 1 sg.-√ma-cont.-2 sg. d.b.

'"He$_i$ will give food to this man's wife", I am doing re you$_i$ or 'I want you to give food to this man's wife' or (less plausibly) 'I am making you give food to this man's wife'

[dambun -gu -ga iya] njinmeriṛa

'camp' dat. int. masc.-fut.-√a 2 sg.-√ma-cont. - 1 sg. d.b.

'Are you doing "He$_i$ will go to the camp" with respect to me$_i$?' or 'Do you want me to go to the camp?' or (less plausibly) 'Are you making me go to the camp?'

[yinda wanḍidj iroṛa] amaṛenḍu

'spear' 'make' masc.-3 pl.-fut.-√w$_1$u- 1 sg. d.b. masc.-√ma-past -3 pl. d.b.

'"They$_i$ will make a spear for me", he did with respect to them$_i$' or 'He wanted them to make him a spear' or 'He forced them to make him a spear'

Note that even these sentences can only be barred from a "reported speech" reading if as I have said, we take reference as "given": each of

them is homophonous with a "reported speech" sentence having different coreference relations. To get the reported speech reading, all one has to do is to change one of the referential indices in my first gloss to (j), indicating that the non-participant NP which is indexed in the subordinate clause is <u>not</u> coreferential with the matrix object, i.e., '"They$_i$ will know this word," they said to us$_i$', etc. Thus the distinction between these two constructions cannot be made on strictly formal grounds, but requires recourse to information about their reference in a given context (cf. sec. 4.5).

But the grounds for such a distinction are lacking when the √ma of the matrix sentence lacks an explicit object. The rule for subject coreference is the same for √ma complement clauses of all kinds: the subject of √ma is coreferential with, and only with, all first person pronominal elements in the complement clause. Hence there are √ma complement clauses which are ambiguous among all three readings: reported speech, causative, and intentional, e.g.,

[warmala-yu njuminda] gudmarari

'desert'-lat. fem.-3 sg.-fut.-√minda 2 pl.- √ma-past-du.
'he will take her'

'You two said "He will take her to the desert"' or 'You two said that he would take her to the desert' or

'You two wanted { her / him / me } to take her to the desert' or

'You two made { him / me / her } take her to the desert'

Cross-clause coreference relations, then, do not always provide enough evidence for distinguishing between reported speech √ma complement

clauses and causative-intentional ones. But that is not the only kind of evidence which is relevant to the question. Another difference, which, when it appears, does so independently of any particular person-adjunct-coreference configuration, is that causative-intentional clauses, but not reported speech ones, are sometimes "discontinuous," with part of the √ma clause occurring after the √ma verb which frames it. That is, in generative-transformational terms, causative-intentional clauses are optionally subject to some kind of movement rule(s) which transport some kinds of √ma complement constituents out of the clause, so that they end up to the right of the √ma verb in surface structure. Unfortunately, I failed to give this matter sufficient attention while in the field to be able to say exactly which elements may be moved in this way, or exactly how "far to the right" they may be moved. So some further investigation is in order. I can say now, however, that one element which cannot be moved is the verb (whether simple or compound), and that the main effect of these movements (their "stylistic purpose," if I may say so) is to place the verb of the √ma complement immediately before its framing √ma verb, with the pair of them occurring as close as possible to the beginning of the whole sentence.

Again, it is only in causative-intentional √ma clauses, never in "reported speech" ones, that such movement is allowed. Thus an alternate version of the last example in this causative-intentional reading only is:

njuminda	gudmaṛari	warmaḷa -yu
fem.-3 sg.-fut.-√minda	2 pl.-√ma-past-du	'desert'-lat.

'You two wanted {him / me} to take her to the desert' or

'You two made {him / me} take her to the desert'

where warmala - yu has been moved out of the √ma complement, and ends up to the right of the framing verb. Likewise, all of the non-verbal material occurring to the left of the √ma complement verb in the example on p. 211 may be moved over to the right of the √ma verb.

The distinction between reported speech clauses and causative-intentional ones, then, is one which is supported by two quite different sorts of evidence, one involving patterns of cross-clause coreferentiality and the other having to do with the obligatorily continuous vs. optionally discontinuous nature of their (surface) structure.

But there is a third kind of evidence which not only supports that distinction, but also allows for a partial distinction on formal grounds between two kinds of √ma complement which have hitherto been treated as different only in function, viz.: the causative and the intentional.

I have claimed above that any first person pronominal elements occurring within a √ma complement clause of any type must be coreferential with the subject of √ma. But among the sentences I have given to exemplify the causative-intentional construction, there is none in which a first person pronominal occurs as the subject of the √ma complement clause itself. To have used one would have confused matters by forcing me prematurely into another line of argument. For when the √ma complement clause subject is a first person one, we have a different kind of evidence for the reported speech/causative intentional distinction--one which has nothing to do with coreference. It turns out that in such cases, the presence of an object marker on √ma, rather than dictating distinct cross-clause coreference relationships for reported speech vs. causative intentional meanings, rules out the latter altogether. The following sentences, for instance, just because they have first-person subjects in the √ma complement clause combined with the absence of

overt √ma objects, have only the "reported speech" readings, as indicated:

[mindi - yali ada ŋiwa] amerera

'here' 'indeed' 'sit' 1 sg.-fut.-√wa masc.-√ma-past-1 sg. d.b.
'"Here I will sit", he told me' or 'He told me he would sit there'

[njanjirunulu djubago biri] gudmenaŋga

fem. 1 pl. ex.-fut.- √ŋulu 'tobacco' b-class 2 pl.-√ma-past-3 sg. d.b.
'"We will give her tobacco", you people said to him' or 'You people told him you would give her tobacco'

Here then is a third piece of evidence for the two-way distinction made above. But what happens when first person √ma complement clause subjects occur in sentences wherein the √ma verb lacks an overt object? Those sentences are special in another way. Just when they contain an active (i.e., non-reflexive) form of √ma as the framing verb, the ambiguity between "reported speech" and other readings reappears. But now (i.e., when the √ma complement clause subject is a first person one), another ambiguity--one which has hitherto been treated as pervasive--is resolved. No such sentence has both a causative reading and an intentional one. Just when the √ma complement clause subject is first person, the sentence is disambiguated as between these two readings by the voice of the framing √ma verb: if it is active, the construction is an intentional (or reported speech) one; if it is reflexive the construction is a causative one (the reported speech reading in this case being ruled out by the reflexive root suppletion discussed on p. 137 above).

For example:

[ada ŋiwa] ama

'sit' 1 sg.-fut.-√wa masc.-√ma
'He says "I will sit down"' or 'He says he wants to sit down' or 'He wants to sit down' but not * He makes himself sit down

vs.

[ada ɲiwa] amaṛen

masc.- √ma-ref.-pres.

'He makes himself sit down' and not *He wants to sit down or *any reported speech reading.

As a summary, table 33 brings together all of the relevant variables by which the three kinds of √ma complement clauses may be distinguished from one another:

TABLE 33

FEATURES DISTINGUISHING TYPES OF √MA COMPLEMENT CLAUSE

Diagnostic Features	Type of √ma Clause		
	Reported Speech	Causative	Intentional
Tense of main verb in √ma clause	Can be of any tense	Future	Future
Coreference restrictions	Subject of framing verb is coreferent to [+ego] forms in √ma complement clause, and object coreferent to [+tu] forms	Subject of framing verb is coreferent to [+ego] forms in √ma complement clause, and object coreferent to [-ego] forms	
Is discontinuous constituency permitted?	no	yes	yes
May the framing verb take an overt object when the √ma clause subject is [+ego]?	yes	no	no
What is the voice of the framing verb when the √ma clause subject is [+ego]?	Active	Reflexive	Active

3.3.1.4. Higher Order Mode Prediction

In the last chapter (sec. 2.4) I mentioned a set of Ngarinjin words which, following Coate and Oates (1970, p. 57) I called the "mode particles," claiming that they comprised a class which was isolable on syntactic grounds inasmuch as each of them occurs only with verbs of certain of the "basic" mode categories which are obligatorily indicated on the inflected verb. (For purposes of which definition "future" must be considered as one mode, and "past and present" indicative as another.) What these particles seem to do semantically is to subcategorize those basic modes, much as the choice of auxiliary subcategorizes the verbal particle for action type (as per sec. 2.2.13).

In order to construe the matter in this way--in order to see these particles as a functionally unified class implementing second-order distinctions of "mode"--one has to be open to the possibility that "modal" categories may serve functions which, from an Anglo-centric point of view, one might not expect them to serve (see, e.g., sec. 3.3.1.4.7).

On the other hand it is Ngarinjin rather than English which, if the generative semanticists' conception of modality is on the right track, more closely reflects at the surface the underlying modal structure of natural languages. For insofar as Ngarinjin implements its modal categories by means of the mode particles discussed here, it does so in a manner which, even at the level of surface syntax, looks like a form of higher-order one-place predication, which is precisely the form of underlying structures which have been proposed to account for modality even in a language like English.

Although Ngarinjin has an elaborate system of auxiliary verbs, none of the meanings of any of the roots has anything to do with modality.

Nor do any of the inflected independent verbs. Though the language is rich in concord morphology, none of it is drawn up on to create the kind of surface structure (common in many languages) in which modality seems to be predicted of some particular argument of the sentence in which it occurs (as, for instance, in the English sentence: "Lighting might strike us"). Instead there are these mode particles, which occur in construction with the whole sentence or clause with which they occur.

3.3.1.4.1. wa

The mode particle wa is one which was discussed and exemplified quite extensively in the last chapter (sec. 2.2.4) in connection with the morphology of the irrealis verb. The particle occurs only with irrealis verbs and serves to disambiguate them by specifying definite negation as opposed to the merely "potentially negative" force of the bare irrealis verb.

Its position within the sentence is probably the least variable (least influenced by discourse considerations) of any of the mode particles: it almost always comes just before the verb unless there is an adverb before the verb, in which case, the adverb usually intervenes between wa and the verb.

For examples of sentences including wa, see p. 126.

3.3.1.4.2. buray

This word is (etymologically anyway) the plural or "b-class" form of the adjective -ay, which means 'none'. The word is also used in isolation to mean 'no'. But what is relevant here is a third use in which it functions just like the negative mode particle wa.

For example:

buray dalu winjdjaw ŋabun

'not' 'pour out' w-2 sg.-irr.$\sqrt{w_1 u}$ 'water'

'Don't pour out the water!'

Although buray is used in this function much less frequently than wa, it seems to be an acceptable alternate form in every environment where the latter occurs. (The converse of course, is not true, since buray has other functions.) Just where it can substitute for wa, buray may be considered a mode particle.

3.3.1.4.3. gadjinga

This particle too occurs only with irrealis verbs, and has a negative force. But it specifies that the action, state, or relation described in the sentence in which it occurs is one which not only did not, does not, or will not happen, but also could not happen, one which is not merely accidentally non-actualized, but necessarily so under the circumstances presupposed by the speaker for the purposes of the utterance. Ŋaṛinjin speakers often gloss this meaning as 'can't', which is about as close an equivalent as one can find in English, but there are some important differences in the range of modalities implemented by Ŋaṛinjin gadjinga and standard English can't (or cannot). I append the qualifier "standard" to "English" because in the various forms of pidgin English spoken by Ngaṛinjin people, the word can't is used in a way which brings it much closer to gadjinga than to the can't of Standard English.

The difference between the latter two has to do with the relative sizes of the domain ("scope") over which they make their predictions. Standard English can and can't are ambiguous in this regard. In one use, which is perhaps not a "modal" use at all, they predicate of the subject NP the ability or inability to perform the action, or assume the state,

described by the verb to which they serve as an auxiliary, e.g.,

Peter can swim.

Sam can't play cribbage.

There is another use of can and cannot in which they conform much more closely to the conception of the underlying structure of modality discussed above (p. 217). In this use they comment, not on the subject's ability, but on the possibility of impossibility of the state of affairs described by the entire clause or sentence in which the word occurs, e.g.,

It can get very dry here in the summer.

I'm wondering whether that can be my long lost mother-in-law.

No, that can't be her because she has a mole on her nose.

What makes Unarinjin gadjinga different from Standard English can is that it functions only in the latter of these two ways: it never predicates ability or inability of the subject only, but includes the entire clause or sentence within its scope.

For example:

wonay budunari gadjinga wula njargo

'woman' 'little' 'can't' 'talk' fem.-1 pl. ex.-irr-$\sqrt{w_1u}$
'It's impossible for us to talk to that young woman'

njindi - yali rambar-ni gadjinga njingini

'she' 'indeed' 'mother-in-law-my' 'can't fem.-irr.-$\sqrt{y_2i}$-past
'That can't have been my mother-in-law'

3.3.1.4.4. biyara

This particle, which occurs only with irrealis verbs, is the "positive" counterpart of gadjinga. If the latter means 'cannot', then biyara means 'can'. But like gadjinga, and all the other mode particles, it occurs

only in construction with whole clauses and sentences, which means it cannot be used in the same way as the Standard English can in the first two examples on p. 220. This is perhaps the reason why it is usually glossed by native speakers, not as 'can', but as 'might be', English might being an auxiliary which, unlike can, does predicate "possibility" of its entire clause or sentence. (Note that can and cannot in the last three English examples above (p. 220), but not in the first two, can be replaced by might and might not without much change in meaning, which provides support for my distinction between two quite different kinds of can and cannot.)

Interestingly, in all varieties of pidgin English spoken by the Ngarinjin, the word maydbi (< English might be) is closer in its syntactic behavior to an Unarinjin verbal particle than to an English auxiliary: it is an uninflected element which, unlike the verbs of the Pidgin, occurs sentence-initially.

For example:

maydbi im ben ludjam dad olguman belonga im

'can' 'he' past 'loose' 'that' 'old woman' poss. 'he'
'It is possible that his elderly wife has died'

maydbi mindubela djidawm longa dinakem

'can' 1 du. ex. 'sit down' loc. 'dinner camp'
'It is possible that he and I will stop for dinner' or
'Suppose he and I stop for dinner'

The use of biyara in Unarinjin exactly parallels that of maydbi in Pidgin (with the additional requirement, of course, that the verb be marked for irrealis mode, a category for which the verb does not inflect in Pidgin.

For example:

biyara ŋgumiyaŋga wuḷan di

'can' w-class 3 sg. sub-irr.-√miyaŋga 'word(s)' w-class
'understand'

'It is possible that he understands that word'

biyara bedja djaṛi njaŋgani

'can' 'already' 'leave' fem.-irr.- √a - past
'She may already have left'

This particle plays a part in some kinds of counterfactual conditional sentences (cf. pp. 200-201 above).

For example:

[djalimbaran - guḍe naŋginji - ŋari] biyara bodba

'feathers' com. 1 sg.-irr.-√yi - subordinate clause 'can' 'fly'

ŋanganji dambun mowaḷawa

1 sg.-irr.- √a - past 'territory' 'distant'

'If I had had feathers, it would have been possible for me to have flown away to a distant land'

3.3.1.4.5. biya

This is a particle which also occurs only with irrealis verbs, and is very close in meaning to biyara. In fact there are some sentences in which it has occurred, for which I have been unable to discover, or to elicit from informants, any difference whatever. In other sentences however, biya, in addition to predicating 'possibility' carries with it a note of speaker approbation: it says not just 'can', but 'can and should', e.g.,

biya nag ŋarge lewaran

'listen' 1 pl. inc. - irr. √yi 'late afternoon'
'be'

'We ought to listen during the late afternoon'

mani biya ŋada·ŋuḷu

'money' 1 pl. inc. ob.-irr.-√ŋuḷu 'give'

'They ought to give us money'

3.3.1.4.6. menja

This particle is in some ways a "mirror image" of approbative biya, discussed immediately above. While the latter occurs with irrealis verbs and means something like 'This may not (have) happened(ed), but it ought to (have)', menja means 'this did/does happen but it ought not (to have)'. Uŋarinjin speakers gloss it as 'too bad', which, in Pidgin is a set phrase which comes close to being a "grammatical" element on the order of maydbi.

Examples of sentences including menja are:

menja ṛulug njarinji dawn - dju

'too bad' 'shift' 1 pl. ex.-√yi-past 'town' lat.
'Too bad we shifted to town' or 'We should never have shifted to town'

menja [ada ŋima] njumeri

'too bad' 'stay' 1 sg.- fut.-√ma fem.-√ma - cont.
'Too bad she intends to stay' or 'Too bad she's saying she will stay'

Sentences which include menja regularly participate in a kind of paratactic construction in which the menja sentence is followed by a non-menja sentence with which it is semantically linked as cause to effect.

For example:

menja aminị djaṛi manjirni

'too bad' 'altogether' 'leave' m-class 1 pl. ex. sub. -√w$_1$u-past

njarala dambun njadaga mindi muḷal bedja

'our home' 'territory' 'our' m-class 'wrong marriage' 'now'

njayayiri

1 pl. ex. - $\sqrt{a}$ - cont.

'Too bad we left our home territories altogether: now we are marrying in the wrong way' or 'Because we unfortunately left our home territories, now we are marrying in the wrong way'

Interestingly, just where it participates in this kind of paratactic causal construction, menja sometimes seems to lose its "disapprobative" meaning in favor of a purely causal one, e.g.,

menja ḅaḍa waṛi minjinaṉga, gaṇaṉgan

'wings' 'burn' m-class-$\sqrt{y_2 i}$ - past-3 sg. d.b. 'now'

ḅaḍa dubala mure

'wings' 'red' m-class-d.s.-$\sqrt{y_2 i}$
'they are'

'Because his (i.e., the crimson winged parrot's) wings got burnt, those wings are red now'

3.3.1.4.7. yagu

This word is usually glossed by Uṉaṛinjin speakers as 'try', but its syntax is much different, both from that of English 'try' and from that of any kind of Uṉaṛinjin verb. It is not inflected for person, nor does it appear in combination with an auxiliary verb. Rather, it occurs sentence initially in construction with a separate simple or compound verb, which must be of a certain mode: imperative, optative, or future. Thus its surface syntax is that of a mode particle.

But can a word which glosses as 'try' really have anything to do with modality? Or is its similarity to the mode particles a surface-structural coincidence? In order to answer that question, it is helpful first to note one important difference between yagu and the other "mode particles." In addition to the expected restriction to co-occurrence

with certain grammatical modes, which in this case are imperative, optative, and "future," there is a further restriction regarding the last mode: future verbs can co-occur with yagu only if the subject of the verb is a first person one.

Now consider, as a contrastive case, the semantics of the English word try. Two things which seem to be necessary in order for an action to qualify as a try are:

a) an intention on the part of the agent that a certain result, namely that described in the complement of the verb try, be effected by means of that action;

b) uncertainty about whether that result will, in fact, come to pass.[1]

Hence the strangeness of the following sentences:

1) Nixon didn't intend to cover up his involvement in Watergate, but he tried to do so.

2) I was certain that I'd see you at the masked ball and I tried to do so.

With respect to condition b), the question arises: In whose mind must the uncertainty exist--the speaker's or that of the person doing the trying? In my second example above, I have cleverly avoided this question by making them the same person. But where this is not the case (i.e., when

---

[1] See Wittgenstein 1963, p. 161, for a somewhat different condition purporting to do the same thing as this one, but couched in terms of "difficulty" of accomplishment rather than uncertainty about a future state of affairs. While his condition fails to account for several of the examples adduced here, the condition given here accounts for his example more easily than his does. This is so, I think, just because my condition implicates more of 'modality' than his does, the meaning of try being more mode-like than may have been suspected, as this confrontation with yagu reveals.

the subject of try is something other than first person singular) what usually counts is the attitude of the person performing the action, not that of the speaker. Thus, in the contrast to example 2) above, the following sentence seems less strange:

> I was certain that he'd see you at the masked ball and he tried to do so.

But things come out differently when try appears in the imperative mode rather than the indicative. When that happens, the locus of relevant uncertainty shifts from the performer of the action over to the speaker. Hence the strangeness of the second of the following two examples, as opposed to the relative smoothness of the first:

> I'm not certain you'll see him at the masked ball: try to do so.
>
> I'm certain you'll see him at the masked ball: try to do so.

This difference in the locus of uncertainty for imperative try is probably tied up with a more basic difference--in the locus of intentionality. The first of my two conditions on try above (p. 225) placed the intention solely with the agent of the action. But when the mood is imperative, things are actually more complicated than that. It may be that an intention on the part of the agent is still required. Hence the following sentence seems more than a bit strange:

> Try to cover up my involvement in Watergate even if you don't intend to do so.

But over and above (or perhaps behind) any intention which may be required on the agent's part, an intention to bring about the result described in the complement of try is definitely presupposed on the speaker's part. Hence the strangeness of:

Try to cover up my involvement in Watergate even though I intend for there to be no whitewash at the White House.

After this apparent digression into a rather arcane area of English verbal semantics, we are now in a position to return the question of what a particle which is glossed as 'try' could have to do with modality. Both of the conditions on try developed above, the intentionality condition and the uncertainty condition, involve questions of modality, i.e., of the "speaker's commitment with respect to the factual status of what he is saying" (Lyons 1968, p. 307; cf. also Jakobson 1957) whenever:

1) 'try' has a first person subject, or

2) 'try' occurs as an imperative verb.

Only when the subject of indicative try is a non-first-person one does the speaker's attitude toward the proposition carried by its complement become irrelevant. Then and only then does the meaning of try lack a modal component.

Another thing to notice about this English verb is that it says two things (given in the two conditions developed above) which are logically independent of each other and could just as well be expressed separately, the combination of them implementing the same semantic complex as try.

Now suppose there is a language which lacks a verb of trying of the kind discussed here (i.e., one which takes a sentential or infinitive complement or equivalent), but does include among its regular grammatical modes one which means something like: "I evaluate any yet-unrealized state of affairs which is projected by this sentence as one which is not certain to come about." Suppose further--what is less exotic--that the grammar of this language includes (tense)/mode categories which express speaker intentionality. Now, given the analysis of try developed above, it would

be possible for speakers of our try-less language to construct the functional equivalent of a try sentence solely by means of the regular modal categories otherwise at his disposal.

Unarinjin seems to be just such a language. What English does with a higher verb, Unarinjin does by pairing imperative or other intentional forms of the verb with the sentence particle yagu, which means just what my account above describes. (Since the minimal gloss of this particle, given there, is quite unwieldy in its length, I gloss it simply as 'uncertain' in my interlinear translations in the examples below. This should be read as an abbreviated form of that fuller gloss in each case.)

Examples of imperative sentences of this kind are:

yagu bandumindara ŋala biri

'uncertain' b-class ob.-√minda- 1 sg. d.b. 'meat' b-class
'Bring it to me'
'Try to bring me some meat'

yagu bandug bi

'uncertain' 'settled down' imp. -$\sqrt{y_2 i}$
'Try to settle down'

Just as with imperative try in English, there is a presumption here on the part of the speaker that the intended result, the bringing of meat, or the settling down, is one which is not certain to come about, either because of the actor's inability to bring it about or because of some other circumstances beyond his control.

The same is true of yagu as used with verbs in the optative mode, e.g.,

yagu balja ide woŋay

'uncertain' 'go' masc. ob.- 3 pl. sub.- √(r)a - opt. 'women'
'Let's try letting women go to him'

But it would be a mistake to consider yagu by itself to be the equivalent of try, for it predicates only uncertainty, and no element of the intentionality inherent in try, the latter being carried here solely by the verb itself.

That this is true of yagu in general is clear from the person restrictions on the other kind of "intentional" verbs which co-occur with yagu, namely the so-called "future" verbs. As mentioned above (pp. 224-25), they can enter into such co-occurrence only when the subject of the verb is a first person one. This agrees with the fact that, although future verbs with first or third person subjects may form intentional clauses when framed by a $\sqrt{ma}$ verb (as per pp. 207ff.), only the first person forms have "intentional" force when not embedded in a $\sqrt{ma}$ construction. It is because yagu by itself does not carry any intentional force that it may form try constructions only with those future forms which do carry such force.

Examples of such sentences are:

yagu ŋariya bigdja - gu

'uncertain' 1 pl. inc.-fut.-$\sqrt{a}$ 'movies' dat.
'We'll try to go to the movies' or 'Let's try to go to the movies'

yagu linj njiniyo

'uncertain' 'look at' 2 sg.-1 sg.-fut-$\sqrt{w_1u}$
'I'll try to look at you' or 'Let me try to look at you'

Note that if yagu were not limited to occurring with future verbs only when they have first person subjects as in these examples, it would either:

1) not be a purely modal particle, or

2) not be forming a try construction.

For if it were forming a try construction, the intentionality which would have to be signalled by the particle would be that of someone other than the speaker, which would remove part or all of its meaning from the sphere of modality (part of it if the "uncertainty" which the particle would still have to carry were that of the speaker; all of it if it were that of the actor referred to by the subject of the verb).

But the fact is that yagu does not occur with non-first person future forms and hence there is no reason for not following the suggestion provided by its syntactic behavior and declaring it a full-fledged mode particle.

CHAPTER 4

SUPRA-SENTENTIAL STRUCTURE

4.1. Does it Exist?

The intended subject matter of this chapter--"supra-sentential structure"--is one whose very existence as a legitimate domain of linguistic science has been implicitly or explicitly denied by some of the most influential figures in linguistics. For de Saussure, the sentence itself, and all larger units, belonged to parole, and hence were not susceptible of any kind of systematic account (de Saussure 1959, p. 124). Bloomfield, adapting a formulation by Meillet, characterized the sentence as "an independent linguistic form, not included by virtue of any grammatical construction in in a larger form" (Bloomfield 1933, p. 170; cf. Bloomfield 1926, p. 158), and hence he limited grammatical study to the sentence and smaller units. Here he agrees with virtually all known ancient, medieval, and classical grammarians, who turned over the supra-sentential field to the rhetoricians (cf. Robins 1967, pp. 26, 33, 81ff., 138ff.). Chomsky has always limited the grammarian's task, in principle, to the modelling of an idealized speaker-hearer's ability to produce and understand grammatical sentences (for his latest formulation, see Chomsky and Lasnik 1977, p. 428), a stricture which almost all American Post-Chomskians (of whatever stripe) accept in practice (but cf. Williams 1977, and refs therein).

But very many utterances in Ungarinjin, as in any language, prove,

upon sentential analysis, to consist of more than one sentence. When this is the case, almost every sentence of the utterance includes some formal elements whose presence is conditioned by the presence of certain other elements in the linguistic context outside of that sentence. (For some ways in which this is true see p. 188 above, and pp. 259ff. below; cf. Halliday and Hasan 1976 for similar conclusions about English, and, e.g., Palek 1968 and Dressler 1972 for some less language-specific arguments pointing in the same direction.)

This being so, there exists by definition a "system" of supra-sentential relations among linguistic elements. Since those relations figure in almost every sentence of naturally occurring (as opposed to linguist-elicited) Unarinjin, some account of that system would seem to comprise an essential part of any attempt to describe the language as fully as possible.

Indeed, if this chapter could be written along the same lines as the first three, I would now try to give such an account, holding the amount of purely methodological discussion to a minimum. But given the current state of linguistic theory, it cannot be done that way. For even among the linguists who do admit some kind of supra-sentential level as a legitimate area for linguistic investigation, there is, as I mentioned in the introduction, not enough common ground to permit such an investigation to proceed in the same catholic spirit which informs chapters 1-3.

Accordingly, while each of those chapters took the form of a descriptive survey of a particular level of Unarinjin grammar, in which some implications for linguistic theory were drawn out as the opportunity arose, this chapter will instead take the form of a largely deductive inquiry into the nature of supra-sentential linguistic structure, in which

some especially useful examples are drawn from Unarinjin as they become germane.

I begin with a critical survey of the existing body of theory on "text grammar" and "discourse structure." This will lead to a consideration of the relationship between supra-sentential linguistic theory and a broader theory of language in context, from which I conclude that the former can exist only as a sub-species of the latter.

4.2. Competing Paradigms

As I see it, the main difference among the theories of those linguists who do admit a supra-sentential level is one which divides them into two camps: the "hierarchicalists" and the "serial concatenationists." For the hierarchicalists, which include Pike (1967), Grimes (1975), Longacre (1971), Petöfi (1971), van Dijk (1972), Hartman (1968, 1971), Schmidt (1969) and Dixon (1972), there exists some supra-sentential unit which, in the nature of its structure, is like a sentence writ large, having its own inventory of constituent types and text-level syntagmatic relationships into which the constituents enter. Among the serial concatenationists, including Harris (1952, 1962), Palek (1968), Daneš (1970), Firbas (1974), Harweg (1968), Halliday and Hasan (1976), the existence of such a unit may or may not be admitted in principle, but turns out to be irrelevant in practice. For the various constituent types and relations in terms of which these theorists operate, although they are "textual" in character, can all be found within single sentences, and so may be established without reference to a distinct, higher order of purely linguistic structure. In this view, supra-sentential "text" or "discourse" is of linguistic interest primarily as context for the sentence and smaller units.

This capsule summary of the difference between the two camps is perhaps vague and certainly oversimple in view of the considerable differences among the thoeries of those whom I have construed as camp-mates. Although a full review of all those theories would be well beyond the scope of this chapter, I want to characterize some of them in enough detail to support the opposition I have drawn between camps. For its terms comprise the basis for a more adequate theory than exists in either camp.

4.2.1. Pike

One of the most influential hierarchical theories has been that of Kenneth Pike, the thrust of which will be clear from the following:

> . . . the emic segmental identification leaves unsettled the question: What segments or segment sequences shall we consider to be wholes, from an emic point of view? Is the church service a whole? If so, how can the preaching of the sermon which is part of the whole service be itself a whole (even though it may seem obvious that it is such)? Or what if a sonnet is quoted in a sermon--is the sonnet not a whole? If, as a point of departure for a study, one decides as I do that sonnet, sermon, and church service are each in some way wholes, then one must conclude that there is in behavior a HIERARCHICAL STRUCTURE . . . in which smaller emic wholes may be viewed as parts of larger emic wholes, which in turn are parts of still larger ones--somewhat in the way in which on an old-type Dutch Cleanser can is a picture of a Dutch maiden holding in her hand a Dutch Cleanser can on which is a picture of a Dutch maiden holding in her hand a can on which . . . (Pike 1967, p. 79).

Emic segments of "purposive human activity" (op. cit., p. 121), which have "closure signalled by overt objective cultural clues within the verbal or nonverbal behavior of the domestic participants or domestic observers" (and a kind of "trimodal structure" which is too complicated for a brief summary), such as the service, sermon, and sonnet in the above example, are instances of the behavioreme, which is the basic unit in Pike's "unified theory of the structure of human behavior." A verbal behavioreme, which is merely a special case of the more general phenomenon

just described, is an uttereme. The behavioreme, and hence the uttereme, has a minimum size or "threshhold" (which is calibrated in accordance with Pike's notion of "purpose") but has, in principle, no maximum size. Utteremes are regularly embedded in larger utteremes and/or verbal + non-verbal composite behavioremes, in which case their distribution is to be analyzed by "slot" and "class," just as is the distribution of units within the uttereme itself. Contra Bloomfield, Chomsky, etc., the sentence level in this analysis is not accorded any kind of privileged status:

> . . . By insisting that units have first relevance in reference to occurrence in a higher-layered slot, we reject [Bloomfield's] definition of the sentence [see above, p. 231]. It is precisely for this reason, furthermore, that we are forced to insist that linguistic analysis must take as part of its essential domain the treatment of units larger than the sentence. Without these higher-level units there are not available adequate distributional matrices for determing sentences themselves. A sentence is first of all a unit which occurs in a slot in a higher level structure--as part of of a monologue, or as a total utterance, or as a response in an utterance-response structure, etc.
>
> Hierarchical structure does not end with the sentence, nor begin with it. Rather it must begin with the total language event in a total cultural setting--which, in turn, is in a total physical setting. It is precisely this interlocking on higher and higher levels of integration that forces us to treat language as merely one phase of human behavior, and structurally integrated with it (Pike 1967, p. 484).

But as attractive as this formulation is, it is not an accurate characterization of Pike's actual working procedure. In practice it turns out that the sentence, qua sentence, is seldom of any importance as a unit within a larger behavioreme (uttereme or otherwise). Large-scale behavioremes resolve themselves into such smaller ones as football games, plays, sermons, sonnets, verses, and "responses," but not (except in "analytical hypostasis," per Pike 1967, p. 108) into sentences. This is not surprising. For, however much it would simplify the task of text analysis

if they did, sentences just do not fall into neat "classes" which regularly fill certain functional "slots" at some higher level, as do all smaller linguistic units, and other large-scale behavioreme constituent types, such as those mentioned above.[1]

Yet even in Pike's system of linguistic analysis (and by far the greater part of his massive 1967 volume is concerned with strictly "verbal" behavioremes, whatever else its title may suggest), as in almost every other (but cf. Sayers 1976), the sentence is itself crucial as a structural domain, even if not as a unit in any higher structure. What this means is that Pike, in spite of himself, is stuck with a sharp discontinuity between the sentential/infra-sentential hierarchy and what we can call the extra-sentential one (i.e., that on which "sentence" is not a relevant structural level). While it is manifestly true that "hierarchical structure does not end with the sentence, or begin with it," it does not follow, even in Pike's own practice, that the sentence, qua sentence, has "first relevance in reference to occurrence in a higher-layered slot."

I shall return to this problem below, where I shall argue that it is smyptomatic of an underlying disorder which calls for surgery on Pike's theory. But first I want to contrast that theory with some other hierarchical ones, so as to be able to diagnose the extent to which the problem lies with hierarchicalism in general, as aginst Pike's particular brand of it.

---

[1] In this connection it is not without interest to note that within very many cultures (probably all of them) there exist units which not only would be recognized by Pike as utteremes (i.e., which have "closure signalled by objective cultural clues"), but which also are overtly recognized as units within the culture itself, and have a place within some kind of "native theory" of linguistic behavior. Many such ethnotheories even include something like our western concept of the "word" as a unit. But not so the sentence.

4.2.2. Van Dijk

Beside the Pike-inspired "tagmemic" school, the other major group of linguists who recognize a hierarchically structured supra-sentential level are people who are working in Europe under the banner of "Text-linguistik." They do not comprise as cohesive a "school" as the tagmemicists, probably because there is no one Textlinguistiker who has single-handedly exerted the kind of seminal influence that Pike has had on the latter: Textlinguistik is a "school" which is united more by a common program than by a common theory. But that program always includes as one of its central goals the extension of the domain of grammar to a level beyond that of the sentence. The way most text-linguists propose to do this is take, as a point of departure, some version of Chomsky's generative syntax, or post-Chomskian generative semantics, and to adapt, for use at a supra-sentential level, concepts developed within those theories for dealing with single sentences. The linguist's ultimate task, in this view, is to construct a model which will generate grammatical (or otherwise appropriate) texts. (See, e.g., Hartmann 1968, 1971; Schmidt 1969; Dressler 1972; Petöfi 1971; Isenberg 1968; Heidolph 1966.) Unfortunately for the task of comparison, no such proposal has been carried very far beyond the programmatic stage.

A near-exception is to be found in the work of Teun van Dijk, which propounds what is perhaps the most explicit, well-developed generative theory of "text grammar." This being the case, and also because it is consistent in spirit with the proposals of the other text linguists mentioned above, I will, for comparative purposes, treat his 1972 monograph as representative of that movement (cf. Reinhart 1977).

Van Dijk's view of sentence grammar (which is decisive for his

approach to the supra-sentential domain) is, essentially, that which was being advocated by "generative semanticists" McCawley, Ross, Postal, and Lakoff sometime around 1970. His main innovation on that theory is the claim that underlying structures generated by the "base rules" of the grammar are semantic representations of entire texts, not just of single sentences (unless the text just happens to be only one sentence long, as per Van Dijk 1972, p. 39). In order to get from these underlying text-level representations (which are called "macro-structures") to morphophonological ones, van Dijk posits three intervening layers of transformational rules. The resulting five-level hierarchy of rules (van Dijk 1972, p. 19) is as follows:

(R_1) Semantic formation rules for macro-structure.

(R_2) Transformation rules of macro-structures (so-called macro-transformations) having macro-structures as input and transformed macro-structures as output.

(R_3) Transformation rules mapping transformed macro-structures onto sequences of underlying semantic representations of sentences.

(R_4) Transformation rules mapping semantic representations of sequences onto syntactic representations; this set includes a set of lexicalization rules.

(R_5) Rules pairing lexico-syntactic surface structures with morphophonological representations.

Notice that van Dijk does retain, as the output of the R_3 component, a level at which "sentence" is a crucial unit within the supra-sentential system. One might suspect that this would lead him into the same difficulty discussed above in connection with Pike's system, where it was pointed out that the sentence, qua sentence, seldom functions as a unit within any larger domain, even in Pike's own practice. The potential difficulty is one which van Dijk is well aware of, and tries to provide for:

> . . . unlike sentential constituents, sentences do not often function [as slot fillers] in texts; only in exceptional cases can we consider them as substitutable elements (op cit., p. 29).
>
> Textual deep structures (macro-structures). . . have an abstract semantic character and will be specified by (macro-semantic) rules. At this level of abstraction these rules cannot be simple PS-rules, since texts do not have constituents of the well-known type. This is true, in fact, for all semantic descriptions, within the sentence as well. We therefore assume that semantic rules define abstract RELATIONS between underlying macro-categories (op cit., p. 17).

In line with the assertion made in the penultimate sentence of the last quotation above (although not following necessarily from it) van Dijk posits an isomorphism between sentence-level and text-level semantic structure. Both are to be represented in a language which is based on the predicate calculus of symbolic logic, supplemented by "meta-categorical" terms such as "Pred" for predicate and "Arg" for argument, by an arrow sign for "rewrite," by terms from Fillmore's case grammar such as Ag, Pat, Obj, Inst, Source, Goal, and others from Chafe's verbal semantics: State, Process, Event, Action, etc. Derivations at the "macro" level begin with an initial symbol "T" for text, which is rewritten as a text-level "proposition," which may of course take other propositions as arguments. This structure corresponds with our intuitive notion of an "abstract." At the sentence level, it turns out (op cit., p. 20, et passim) there is a distinct (though isomorphic) set of "semantic formation rules" which operate in the same way to yield sentential deep structures. Thus, to the hierarchy of rules on p. 238 must be added another set R_3': non-transformational rules which yield sentential deep structures "in a semi-independent way" (Van Dijk 1972, p. 20) from the transformational set (R_3). At both levels, the semantic formation rules yield (predication-like) representations which need not preserve anything like the linear-hierarchical relations among immediate

constituents which are implicit in the output of phrase structure rules. Thus the "sentence," even as it exists at the abstract level represented by $R_3 + R_3'$, need not be thought of as a "unit" within the macro-structure, nor is the sentence itself composed of "units" which have any obvious manifestation in the surface structure which is the output of R_5.

Van Dijk has indeed arrived here at a system of text analysis which does not suffer from the same defect which he is aware of in Pike's system. But the cost is exorbitant: his underlying representations are so abstract and general that he is unable to give anything like a systematic account of the transformations by means of which they are supposed to give rise to well-formed texts. Thus, we are disappointed to learn, near the end of the theoretical discussion that although "no elucidation has been given on the (certainly very problematic) rules relating [text-level] deep structures with sentential surface structures . . . such an indication would be impossible at the moment because we do not even have a precise idea of how the semantic representations themselves have to be structured" (op cit., p. 140). The same thing turns out to be true even of the relationship between van Dijk's sentence-level semantic structures and their corresponding surface structures (op. cit., p. 20), presumably for the same reason.

The form of the argument here (where an assumption has been smuggled in to the effect that the modelling of semantic structure is an autonomous enterprise which takes precedence over the derivation of surface forms) is indicative of van Dijk's approach to the study of grammar. While that study is commonly thought of as an attempt to characterize the relationship between sounds and meanings, for van Dijk it seems more a matter of

exploring the relationship between meanings and other meanings: specifically, between the extremely abstract propositions of the "macro level" and "textoid" (i.e., non-maximal-text) levels (cf. his remarks, op. cit. p. 143).

I have not gone through this rather lengthy summary of van Dijk's system just to set up a straw man, but rather to draw out a feature which is common to all approaches which <u>are</u> capable in principle of characterizing the global structure of multi-sentence texts. That feature, if we define linguistics as the study of the relationship between sound and meaning, is this: they are not linguistic.

It is instructive in this regard to compare Pike's theory with van Dijk's (and, by implication, the species of which it is a specimen).

Pike intends his theory, in its most general form, to account for a wide range of human behavior, of which linguistic behavior, and the account of it, are a special case. But in fact, I have argued, the theory is too narrowly linguistically based, i.e., modelled too much on the grammar of sentences and smaller linguistic units, to allow for a proper account of the relationship between sentence and text, much less its non-linguistic context.

Van Dijk, on the other hand, seems to intend his text "grammar" to be just that--an account of a supposedly purely linguistic "textual competence" which we have as speakers of some natural language ("textual" competence being a concept which he would substitute for the widely held but inadequate notion of a purely sentential competence [op. cit., pp. 2ff.]). It is somewhat ironic then, that while Pike's (supposedly more generally applicable) system does actually account for the "form-meaning composite" (Pike 1967, pp. 62ff.) of at least some simple sentences, van

Dijk's, because the nature of his base structures precludes workable transformations even at the sentence level, fails to do so altogether.

Both theories are hierarchical, but in different ways: Pike's is a hierarchy of slots and classes; van Dijk's a hierarchy of rules. Despite this difference, both of them posit a kind of isomorphism between the sentence and higher levels. And that, precisely, is where both of them fail. For Pike it leads to a contradiction between the form of his theory and his own manifest understanding of how supra-sentential "behavioremes" are really structured. For van Dijk it leads to the positing of underlying representations which are so abstract and general as to preclude any rigorous account of the actual form of utterances, even those which are only one sentence in length.

Again, my claim is not that either of these two models can be ruled out in principle as a possible theory of the global structure of texts, but that both are mistaken in their conception of the relationship between that structure and the internal structure of the sentence. Taken purely as possible models for the structure of texts, both may even prove to have enlightening applications. While it seems highly unlikely that either van Dijk's abstract propositional model or Pike's concretely linear "slot-class" model has the kind of universal applicability they would claim for it, nonetheless, there do seem to exist, within every culture, whole classes of texts which are typically characterized by one or the other of these two kinds of structure. The Western "disquisition," or the Eastern "Sutra," for instance, could be quite appropriately modelled within some more explicit version of van Dijk's abstract propositional system. Most kinds of songs and religious-ceremonial texts, on the other hand, seem more amenable to a "slot and class" approach.

Notice that, when comparing text-types in this way, we must specify them in terms which, while they may be specific to a given culture, are not specific to a given language. The global structure of well-formed cocktail party conversation, for instance, is much the same whether one is speaking English, Finnish, or Hebrew, even though the structure of the well-formed sentence is very different for each of those languages. Nor does every fluent speaker of one of those languages also have the ability to produce well-formed cocktail party conversation. Likewise, each of the text genres mentioned in the last paragraph is realized in more than one language, but there is none of them in which a speaker is automatically "competent" by virtue of his knowing some given language.

Accordingly, it comes as no surprise that the supra-sentential (or "extra-sentential") part of each of these theories may stand as a possible model for some text structures if and only if divested of its putative sentence-structural affiliations. In Pike's case, this is mainly a matter of acknowledging in principle the sentential/extra-sentential discontinuity which is already observed in tagmemicist practice, an acknowledgment which is consistent with Pike's announced intention to integrate the study of language with that of other (non-linguistic) human behavior, but weakens his claim to a "unified theory" of the two. In van Dijk's case, it is a matter, not of separating the linguistic from the non-linguistic part of the theory, but of acknowledging that the whole thing is non-linguistic, i.e., that it makes no adequate provisions for relating meanings with their actual expressions in any natural language; hence rejecting it as a theory of sentence grammar, abandoning the idea of an isomorphism between the sentence and higher levels,

and concentrating instead on developing its possibilities for the modelling of texts.

But it is nothing uniquely common to these two theories which renders cross-level isomorphism unworkable in them. On the contrary, I have chosen these particular theories to exemplify the failure of such isomorphism precisely because they differ maximally in their conceptions of that isomorphism. Every such theory that I have examined (see p. 233), whether of the slot-class variety, the abstract semantic variety, or of intermediate or tangentially related varieties (such as the syntactically-based, hierarchically structured "topic chains" of Dixon 1972), whatever its other virtues or defects, fails just to the extent that it rests on the assumption of such an isomorphism.

This being the case, one must at least tentatively conclude that the study of the structure of sentences and the study of the global structure of texts are best pursued as separate studies, the former belonging to linguistics as here defined, and the latter independent of it. Divested of their sentence-grammatical connections, hierarchical theories of the kind examined above may still shed light on the structure of some kinds of texts, but cannot be considered to be theories of some integral aspect of language. Rather, they must take their place beside the theories of folk-lorists and mythologists such as Dundes and Lévi-Strauss, of students of literary form from Aristotle to Burke, and the many others who have studied the form of texts without trying to relate them systematically to the forms of any given language.

But, present detour notwithstanding, this dissertation <u>is</u> concerned primarily with the form-meaning relationships of a given language. What we are groping for in this chapter is a means of characterizing

that relationship for the form of Ụnarinjin utterances longer than one sentence in length, a task to which all existing hierarchical approaches are ill-suited by reason of the kind of overgenerality inherent in the two theories just discussed.

But what about the clear evidence from Halliday and Hasan's work cited above (p. 232), along with parallel evidence from Ụnarinjin (pp. 188, 259ff.), to the effect that supra-sentential conditioning of a highly language-specific sort is ubiquitous? Does the fact that no hierarchical text theory is capable of informing a language specific account of such phenomena mean that no systematic account of them is possible at all? Not necessarily, because not all text theories are hierarchical.

Which brings us back to the typological distinction that led into this excursus in the first place--the opposition between theories of the kind discussed above, which I called "hierarchical" theories, and another kind which I characterized briefly (p. 233) under the name "serial concatenationist." Interestingly for our present purposes. theories of this latter type, whatever other weaknesses they may have, do not in general suffer from the defect which was just exposed in the former. In order to show that this is so, and why, I turn now to a summary of two theories which differ in nearly everything except their serial concatenationism, as defined above. This will provide some useful ideas for a thoery of the kind we are looking for in this chapter.

4.2.3. Harris

One of the most widely admired, frequently cited, but least used systems of supra-sentential analysis is the one propounded in Harris 1952. What Harris presents there is, by his own account, a "technique" for the

analysis of discourse, not a theory of its structure. But the technique is, inevitably, determined in part by certain theoretical assumptions concerning the nature of the object to which it is to be applied. Something of Harris' conception of the nature of discourse, and its relationship to the sentence, can be seen from his generalization that:

> . . . when we can state a restriction on the occurrence of element A in respect to the occurrence of element B it will almost always be the case that A and B are regarded as occurring within the same sentence (Harris 1952, p. 2).

The anti-hierarchicalism of this statement is later solidified (with respect to English anyway) into the categorical statement that "no higher-order strings [than sentences] exist" (Harris 1962, p. 49), from which it obviously follows that string analysis is not applicable at the discourse level.

This way of looking at things (which rules out the kind of cross-level isomorphism exemplified in the last section), combined with Harris' predilection for regarding linguistics as a synonym for "the study of the distribution of forms," results in the creation of a unique discourse-level system of substitution classes, in which the absence of higher-order strings is successfully compensated for by the recognition of higher-order equivalence relationships. These relationships exist between "elements" which are not defined in advance, but are determined by examining the pattern of morpheme distribution in the text (a prior segmentation of morphemes being required as "given" for the operation of this system of discourse analysis). The strategy for locating the higher-order equivalence relationships is as follows:

> . . . if we find the sequences AM and AN in our text, we say that M is equivalent to N or that M and N occur in the identical environment

> A, or that M and N both appear as the environment of the identical element (or sequence of elements) A; and we write M=N. Then if we find the sequences BM and CN (or MB and NC) in our text, we say that B is (secondarily) equivalent to C, since they occur in the two environments M and N which have been found to be equivalent; and we write B = C. If we further find BK and CL, we would write K = L by virtue of their having occurred in secondarily equivalent environments B and C; and so on (Harris 1952, p. 6).

A set of elements of a given text, all of which are mutually "equivalent" in this special sense, form an equivalence class with respect to that text. The whole analysis consists of sorting the text out into classes of this kind, as follows:

> . . . Each successive sentence of the text is . . . represented as a sequence of equivalence classes, namely those to which its various sections belong. We thus obtain for the whole text a double array, the horizontal axis representing the equivalence classes contained in one sentence, and the vertical axis representing successive sentences. This is a tabular arrangement, not of sentence structures (subjects, verbs, and the like), but of the patterned occurrence of equivalence classes through the text (op. cit., p. 10).

Unlike all existing hierarchical theories, this approach (to which the description "serial concatenationist" applies in a quite literal way) does provide a means for giving an account of the actual morphemic substance of discourse in a given language. But such an account is of a kind which is of too low an order of abstraction to be of interest as a thing in itself. Nor does Harris intend it to be otherwise. Rather, he sees the technique as one whose results themselves can serve as a convenient basis for the inspection and comparison of texts, and for the deriving of general statements (op. cit., p. 5). By itself the technique does not even lead (in any direct way, at least) to the discovery (or, if you like, the constitution) of such basic abstractions as the major grammatical classes of the language under investigation. Rather, the method is one which, in order to elucidate the structure of discourse in a given

language, is best used in conjunction with the results of some independently justified grammatical analysis of that language.[1] That fact does not in itself preclude our using Harris' technique here, since we do have an independent sentence-grammatical analysis to draw on. The problem is rather that I am uncertain how one could use the results of a Harrisian analysis within the context of an investigation into the relationship between the form of Unarinjin discourse and its meaning.

Harris' own use of the technique, which incorporates the kind of grammatical analysis which is codified in Harris 1951, plus a rudimentary transformational analysis, is severely asemantic. Although he promises at the outset that his approach can reveal "differences of structure between the discourses of different persons, or in different styles, or about different subject matters," he later absolves himself of the task, saying:

> It remains to be shown as a matter of empirical fact . . . that the discourses of a particular person, social group, style, or subject

---

[1]To which end:

> ". . . we would use only those statements of the grammar of the language which are true for any sentence of a given form. For example, given any sentence of the form N_1 V N_2 (e.g., the boss fired Jim), we can get a sentence with the noun phrases in the reverse order N_2-N_1 (Jim-the boss) by changing the suffixes around the verb: Jim was fired by the boss. The justification for using such grammatical information in the analysis of a text is that since it is applicable to any N_1 V N_2 in English it must also be applicable to any N_1 V N_2 sentence in the text before us, provided only that this is written in English. The desirability of using such information is that in many cases it makes possible further applications of the discourse method. [By allowing us to recognize as 'equivalent' certain elements which would not otherwise be so, thereby creating more environments for secondary equivalence, etc.]" (op. cit., p. 4).

Thus did the demands of an a-grammatical technique for the analysis of discourse give rise to a system of grammatical "transformations" whose influence would far exceed that of the technique itself.

> matter exhibit not only particular meanings (in their selection of morphemes) but also characteristic formal features. The particular selection of morphemes cannot be considered here (op. cit., p. 3).

This task is one to which Harris' technique, despite its having been available for over twenty-five years now, has never been successfully applied (Gudschinsky 1959 notwithstanding). We cannot conclude from this fact alone that such an application is impossible, but it does seem as though Harris' approach is more conducive to an understanding of relationships among the forms of a given text than to an understanding of the relationship between its forms and their meanings. Insofar as this is true, its usefulness for our present purposes is limited (for reasons opposite to those seen above in the case of van Dijk, whose approach was found to be useful mainly for relating meanings to other meanings).

What we do want to retain, or reproduce, from this approach is its direct applicability to the actual linguistic substance of discourse. This is assured by the fact that the analysis takes as primitives, not a set of abstract, discourse-level constituent types, but rather the minimal meaningful forms of the language under investigation, as established within an independently-justified sentence-level grammatical analysis.

But being interested primarily in the relationship between the form of texts and their meaning, we need a different kind of system to replace (or at least augment) Harris' strictly distributional account of the patterning of those units: a system which, while not losing touch with the actual substance of discourse, will also allow us to take account of its meaning.

4.2.4. Halliday and Hasan

A good basis for a system of the kind just mentioned is present in

the work of the other serial concatenationist I wish to consider here: M. A. K. Halliday, especially in his fruitful collaboration with Ruqaiya Hasan, as represented in Halliday and Hasan 1976.

Most of what will prove to be useful in their approach follows from its being predicated on a conception of the object of study which differs in various ways from any we have seen so far:

> A text is a unit of language in use. It is not a grammatical unit, like a clause or sentence; and it is not defined by its size. A text is sometimes envisaged to be some kind of super-sentence, a grammatical unit that is larger than a sentence but is related to a sentence in the same way that a sentence is related to a clause, a clause to a group, and so on: by CONSTITUENCY, the composition of larger units out of smaller ones. But this is misleading. A text is not something that is like a sentence, only bigger; it is something that differs from a sentence in kind.
>
> A text is best regarded as a SEMANTIC unit: a unit not of form but of meaning. Thus it is related to a clause or sentence not by size but by REALIZATION, the coding of one symbolic system in another. A text does not consist of sentences; it is REALIZED BY, or encoded in sentences. If we understand it in this way, we shall not expect to find the same kind of STRUCTURAL integration among the parts of a text as we find among the parts of a sentence or clause. The unity of a text is of a different kind (Halliday and Hasan 1976, p. 2).

> Whereas within the sentence, or any similar [smaller?] unit, we can specify a limited number of possible structures . . . which define the relationship among the parts, we cannot in the same way list a set of possible structures for a text, with sentence classes to fill the structural roles. Instead we have to show how sentences, which are structurally independent of one another, may be linked together through particular features of their interpretation (op. cit., p. 10).

Here we have a view which is explicitly opposed to Pike's brand of hierarchicalism in its understanding of the relationship between sentence and text, in which matter it represents an improvement upon that theory, for the reasons discussed above (pp. 241ff.).

But Harris and Van Dijk also reject the Pikian notion of sentence as constituent. It is not just that negative characteristic which makes

this approach a useful one, but rather, the nature of the view with which Pike's is here replaced. For on this score, Halliday and Hasan's approach is, for our present purposes, also an improvement upon Harris' and van Dijk's.

Van Dijk, recall, managed to retain Pike's hierarchicalism (with cross-level isomorphism), even while rejecting his "sentence as constituent" approach, by taking as his "units" (at both levels), a set of abstract semantic categories, which turned out to be impossible to relate to the actual morpho-syntactic substance of any natural language.

Harris, on the other hand, succeeded in creating a text analysis which is directly applicable to actual morphemic forms, but which is indifferent to their meanings.

What makes the Halliday and Hasan strategy more attractive than either of these is that it replaces slot-class text hierarchicalism with an approach which not only allows, but requires us to maintain contact with both form and meaning. This requirement follows from the fact that "text" is <u>defined</u> as a unit of <u>meaning</u>, but one which is <u>realized</u> in the sentences (which in turn have their concrete "expressions") of a given language.

In keeping with this implicit requirement, Halliday and Hasan isolate, as the most important object for a linguistic study of textuality, a phenomenon which they call "cohesion," which is the kind of linkage mentioned in the last sentence of the passage quoted above (p. 250). More fully:

> Cohesion occurs where the INTERPRETATION of some element in the discourse is dependent on that of another. The one presupposes the other, in the sense that it cannot be effectively decoded except by recourse to it. When this happens, a relation of cohesion is set up, and the two elements, the presupposing and the presupposed, are thereby at least potentially integrated into a text (op. cit., p. 4).

The term "element" here is one which is left undefined, but in practice Halliday and Hasan's concept of the "element" turns out to be like Harris' only more so. The Harrisian "element" consists of a sequence of morphemes; minimally of one morpheme's length; maximally of less than one sentence length. Halliday and Hasan's "element" in practice also consists of a sequence of morphemes, but one for which there is neither a maximum size, nor a minimum size: their "elements" are often much longer than a single sentence (see examples on pp. 240-48), and, at the other end of the scale, may consist of a formal zero.[1]

The crucial common feature here, of course, is that the "element" consists of concrete morphemic substance, which assures that this approach will yield results which are valid for some particular language, not just for "text" or "discourse," or even "human behavior" in general.

The crucial difference between the two approaches is in what they take to be the relevant relationships among those elements. (Relevant, that is, for a linguistic analysis of discourse.) Whereas for Harris it is strictly the distributional ones, for Halliday and Hasan it is the "semantic" relationship of "dependence of one element on another for its interpretation." Because of this difference, the Halliday and Hasan approach, unlike the Harrisian one, can hardly fail to reveal something about the relationship between the form of texts and their meaning. For it isolates one aspect of that relationship itself--namely, cohesion--as its main object for study.

What makes their approach such a useful one for our present purposes is the way in which cohesive relations among linguistic elements are

---

[1]Though Halliday and Hasan allow zero elements, they use them sparingly: i.e., only where they arise from fairly clear and uncontroversial cases of syntactically regular "deletion" or "ellipsis."

distinguished from structural ones. For that distinction provides the basis for a better understanding than we have yet reached concerning the relationship between the sentence level and the supra-sentential.

Consider first the structural relations.[1] These are quite familiar, because they are the kind to which virtually all of linguistic analysis has been directed. They are present within every sentence, but only within the sentence and smaller units (which is probably why so few linguists have addressed themselves to the study of any larger unit). Elements which bear a structural relationship[2] to one another go together to realize certain construction types, which bear meanings different from those of the separate elements.

Within Ụnarinjin, for instance, every one of the infinitely many possible sentences of the language comprises elements which together realize one of the two basic verb-adjunct configuration types (or one of their sub-types, taking one or two "optional" adjuncts). Each of the adjuncts in turn comprises elements which together realize one of the noun-phrases types shown in table 31. Each of these various construction types--on both the clause level and the phrase level--has a certain very general, grammatical meaning by virtue of which the more specific meanings of its constituent elements are connected up.

---

[1]The reader is hereby forewarned that in the discussion from this point on I cannot claim to be summarizing views which are those of Halliday and Hasan. Rather, I will be drawing out what I see to be some of the more general implications of their very suggestive (but quite language-specific) work on English. In particular, they should obviously not be held accountable for what I shall have to say about cohesion in Ụnarinjin.

[2]Here I am using the word "structural" in the Halliday and Hasan sense of "grammatical-structural." I do not wish to claim (nor, I think, do they), that there exists no structural relations of any kind beyond the level of the sentence, but rather that relations among elements at the supra-sentential level do not realize language-particular grammatical construction types, such as are found at the sentence level. (Cf. my remarks on pp. 235-36. Therefore, to avoid confusion I will hereafter replace Halliday and Hasan's term "structural" with "constructional."

The head-attribute (type IV) noun phrase construction, for instance, carries, qua construction type, a grammatical meaning of "modification," which is to say that the referent of the head noun is specified as belonging to a class which includes other members from which this one is distinguished by its having the particular property specified by the "attribute" constituent.

On the clause level, the "transitive" verb-adjunct configuration, for instance, signals, minimally, that the action described by the verb is one over which the referent of the subject VP has active control, and in which the referent of the "object" VP is also involved but without necessarily having any control over it (cf. Dixon, forthcoming).

Now consider the difference between structural relations of the kind just described and relations of cohesion, of the kind described on p. 251. Several instances of the latter occur in the following Unarinjin conversational exchange:

A:	guyariwalu	bumandiri	madni-á	alwanjari	djino
	2 pl.-√a-du.-prox.	imp.-√ma-3 du.	'your wife'	'old man'	'over there'
	'you two come'	'say to them two'			

'Tell your wife and that old man over there to come'

B:	aga	dji-ri	wul	ama
	'no', 'but'	masc.-anaphor	'sleep'	3 sg. masc.- √ma

'But he is sleeping'

The anaphoric element -ri of the word djiri (cf. p. 45) in B's response enters into cohesive relationship with at least three other elements within this short text. But let us limit the discussion to the question of its relation to the words alwanjari djino in the sentence

uttered by A--a relationship which is purely one of cohesion. The anaphoric element by its use here establishes what Halliday and Hasan call a "presupposition." It says: "In its full form this sentence would include at this point an NP--one whose referent has been mentioned just recently in this discourse." In this case the presupposed item by which the reference of the anaphor is to be established is the noun phrase alwaŋari djino, which has been uttered by A.

What the cohesive relationship does then is to allow the interpretation--the "decoding"--of one element of actualized discourse: djiri, to be linked up to that of another: alwaŋari djino.

Cohesive relationships are thus of an order entirely different from constructional relationships, of the kind exemplified on p. 253. Each instance of the latter realizes some construction type, which itself has an abstract meaning, specifiable independently of any particular realization of that construction type. By contrast, the meaning of the cohesive relation lies not at the level of types, but at the level of contextualized tokens--at the level which Halliday and Hasan describe (in the quotation on p. 250 as that of "language in use").

4.3. The Role of Indexicality

The nature of the very important opposition between the two kinds of relations just discussed, viz.: "cohesion" and "construction," can be made clearer by placing it overtly within the theoretical framework which I have already hinted at by smuggling in the terms type and token: namely, the linguistic semiotics which has been inspired by the work of C. S. Peirce (for which, see, e.g., Bar-Hillel 1954, Jakobson 1957, and, most important for our present purpose, Silverstein 1976). For that framework

provides a basis for the understanding of a more general opposition, of which this one can be seen as a special case.

The aspect of Peirce's semiotic which is relevant here is his classification of signs according to the nature of the relationship between that which is signalled and that which does the signalling. Where the relationship is one of perceived similarity, the sign is an "icon." Where the relationship is one of understood spatio-temporal contiguity, i.e., where the sign has its meaning by virtue of a direct "pointing" relationship between the signalling entity and that which is signalled, the sign is called an "index." Where the relationship is of neither of these two kinds, the sign is a "symbol."

Within this Peircean framework, what Halliday and Hasan call "cohesion" can be characterized as an indexical relationship, wherein their "presupposing item" stands as an indexical sign which "points to" a "presupposed" one within the immediate linguistic context of the utterance in which the "presupposing item" occurs.

The constructional relationship, on the other hand, functions as a Peircian "symbol." Each realized instance of a construction type signals a particular abstract grammatical meaning, the signalling of which depends neither on perceived similarity nor on situational contiguity.

When Halliday and Hasan's distinction is thus translated into Peircian terms, both cohesion and construction become special cases within larger classes of linguistic phenomena (and within even more inclusive classes of semiotic phenomena, but we will limit the discussion here to the linguistic). As a Peircean "symbol" the "construction type" belongs to a class which also includes most of the lexical items and word-level grammatical apparatus of every language. So prominent within language

is this class of "arbitrary" signs that de Saussure, and others following him, have considered it to comprise the whole of language. But to do so is to ignore or to misunderstand the equally important class of linguistic phenomena to which cohesion belongs.

That class, the linguistic sub-set of Peirce's indexical class, includes all linguistic elements which depend for their meaning on some aspect of the immediate context in which they occur. All of Halliday and Hasan's "cohesive" elements belong to this class. But not all linguistic indices are "cohesive" in Halliday and Hasan's sense because not all of them depend on any aspect of the linguistic context in which they occur. Some depend instead on some aspect of the context of situation. Personal pronouns, for instance, always "point to" participants in the speech event, but not necessarily[1] to anything in the linguistic context. Likewise, the spatial and temporal deictic elements of a language (as, for instance, those listed for Unarinjin in tables 7 and 20 above) point to the time and space of the utterance, but not necessarily to one which is otherwise specified in the text itself.

Having thus reformulated Halliday and Hasan's very useful distinction between cohesion and "construction," we are now in a position to return to the central question of this inquiry, i.e., What is the nature of suprasentential linguistic structure?

In a limited sense, we can now agree with the widely endorsed answer mentioned at the outset, viz.: "There is no such thing." There are, that is, no supra-sentence-level relationships among purely linguistic elements which function as Peircean "symbols" (or Saussurean "signs").

---

[1] I say "not necessarily" because speech events are sometimes embedded in the text itself (as per pp. 204ff. above) in which case the personal pronouns do point to something in the linguistic context.

Hence the failure of all text theories which are "hierarchical" in the sense developed above.

But the absence of Peircean-symbolic construction types at the supra-sentential level entails the impossibility of a supra-sentence linguistics only if one chooses to limit linguistics to the study of Peircean symbols.

There is no reason to impose such a limitation on the subject matter of linguistics, and a very good reason not to. That is that even within the boundaries of the sentence, much of the meaning which accrues to almost every utterance is indexical. Thus, even the linguist who is interested only in the form-meaning relationship of single sentences (i.e., single sentence texts) must deal in some way with linguistic indices.

Unfortunately, the way this has usually been done is to assimilate the index to the Peircean symbol. Thus, even within the movement which has given us the most explicit and fine-grained account of sentence structure, i.e., Chomskyan generative grammar and its various offshoots, we find, for instance, that coreference relations are specified by the use of subscripts (the so-called "referential indices") which, in the operation of syntactic transformation, are treated like structural features which exist at the level of "types."

In other cases, the indexical feature is simply "analyzed out" and taken as a primitive. This is true, for example, of the orthodox generative treatment of "definiteness," which is usually handled by assigning the feature [± DEF], without any indication of the (clearly indexically based) conditions under which one or the other specification is systematically assigned.

What is needed in order to account for these indexical aspects of utterances even at the sentence level is an approach within which they are

scrupulously separated from the Peircean symbolic ones and treated in a manner befitting their context dependency.

The rudiments of such an approach are present in the works cited on p. 255 above. Given the post-Peircean framework developed therein, the question to which this chapter is directed, i.e., What is the nature of supra-sentential linguistic structure?, is a question which can be approached from a direction opposite to the one from which we started above. There, when reviewing the hierarchical theories, we were asking, Can the techniques which have been developed within linguistics for analyzing single sentences be extended to apply to multi-sentence text? Having concluded that they probably cannot be, we need not give up the hope of developing a linguistic analysis of multi-sentence text, but instead can now ask, Among the entire set of indexical means by which the utterances of a given language are linked to their environments, how does one particular set of indices function to link them to their linguistic environment?

Although I cannot yet claim to be able to give anything like a full answer to this question with respect to Unarinjin, I will, for illustrative purposes, cite two examples, the second of which will lead to a concluding generalization about the relationship between the indices which point to the linguistic context and those which point to something else.

4.4. Unarinjin Definite Subject Marking as a Text-indexical Phenomenon

The first of the examples of "text-indexical" phenomena in Unarinjin is the use of the "definite subject" form of verb, described in sec. 2.2.8. As mentioned there, the presence of "definite subject" marking indicates that the subject of the verb so marked is one whose grammatical subject is an NP which is coreferential to one which has occurred in previous

discourse (usually in the immediately preceding clause or sentence) and whose reference has been definitely established.

As a simple example, consider the following excerpt from a text about a certain mythical crocodile:

bililu wandidj woni
'raft' 'make' w-class-3 sg.- $\sqrt{w_1u}$- past

di balja urumara
'then' 'go away' masc.-d.s. $\sqrt{ma}$- past
'He made a raft. Then he (the same one) went away'

The "definite subject" marker in the verb in the second sentence links this sentence indexically to the first one, indicating that its implicit grammatical subject NP is coreferential to some (masculine) noun whose reference has been established and which, in this case, also occurs (as the implicit subject NP) in that previous sentence.

It may be suspected that what we really have here is a construction type involving some kind of embedding, perhaps one carrying a Peircean-symbolic meaning of "temporal succession." That it is not a type of syntactic embedding is strongly suggested by the fact that it is quite often used across the boundaries of conversational exchange.

The following example illustrates this, and also shows that the semantic relationship between the indexically linked sentences need not be one of "temporal succession":

A: gunja amara djinda
'what' masc.-$\sqrt{ma}$-past 'this one'
'What did he say?'

B: ari, gunja urumara
'yes' 'what' masc.-d.s. $\sqrt{ma}$ - past
'Yes, what <u>did</u> he (that one) say?'

Note that the condition for the use of the definite subject form is that the subject of the verb be coreferential with an earlier NP, not that it must be an identical NP. That it need not be an identical NP is illustrated by the following example:

yod gudi ganda - ŋa . njarri - ŋa

'stay' 2 pl. - √y_2i 'here' 'just' 1 pl. ex.- 'human' 'just'

'"You (pl.) stay right here. Just we folks,

njaya amara . biranganja

1 pl. ex. - √a masc.-√ma-past 3 pl.-d.s. √a - past-dis.

We go," he said. . And indeed, they went away'

Here the NP to which the subject of the d.s. verb is coreferential is a "first person" one, while the subject of the verb itself is "third person." Although different NP types, they are coreferential because one is contained with a "reported speech" clause (pp. 205ff.).

More complicated than this coreferentiality condition is the requirement that the NP to which the verb's subject is coreferential must be one "whose reference has been definitely established." For it raises the difficult question(s): What constitutes definite reference and why?

Consider, for instance, the following excerpt from a multi-participant conversation among Ngarinjin men:

A: Mowanbarayali bandunjiri djinda

'those two' 'that one'

balja burumarari B: anjdja ari

'go away' 3 pl.-d.s.-√ma-past-du 'what?' 'man'

'the two did' 'what man?'

A: ganjdjalŋari biri

'eaglehawk clan' 'they'

ganjdjalŋari djinda

'eaglehawk man' 'that one'

e-ŋari

masc.- $\sqrt{y_2 i}$-rel.

malbiri - werewiri e-ŋari

(place name) masc.-$\sqrt{y_2 i}$-rel.

muŋgan djiri?

'time' 'that one?'

wiljdjari-yali

'offspring of Wildjari'

djiri

'that one'

C: anjdja

'which'

B: werewiri

(place name)

A: yaw djinda

'yes' 'that one'

anjdja

'what'

C: yaw djinda

'yes' 'that one'

B: yaw , alwaŋari

'yes' 'old man'

(followed by general assent)

Free translation:

A: Mowanbarayali and that other man went away.

B: What other man?

A: Those eaglehawk people.

C: Which one of the eaglehawk clan?

B: The one who died (lit: who is . . .) at Werewiri.

A: Yes that one who died at Malbiri-Werewiri. (To B): When was that?

C: Oh yes, you mean Wildjari's offspring?

B: Yes, that old man.

In A's first sentence, he has used a "definite subject" form of the verb, indicating that both of the referents of its subject can be considered to have been definitely established. All of the participants in the

conversation know who Mowanbarayali is, and most of them have probably heard this story before, so A assumes that they will, by association, know the identity of Mowanbarayali's partner.

But, as it turns out, several of them do not. This being the case, A has a problem on his hands. For Mowanbarayali's partner in this episode has since died, and among the Ngarinjin, one may not refer directly to people who have died within living memory. Thus, although A could establish this man's identity for B very easily by using a proper name, he may not do so. Instead he must establish it as indirectly as possible.

But what is the metric by which various means of referring are ranked for "directness"? Clearly that is not a matter of "Universal Grammar" but of culture-specific "ethno-theories" of meaning. It would make little sense, for instance, to try to rank totemic "clan" affiliations vs. "place of death" within some kind of universal schema. But both are very salient and clearly ranked with respect to each other within the Ngarinjin system exemplified here.

Indeed the whole sequence of alternate means of identification which are tried here exemplifies a ranking which is entirely regular within interactions of this kind, viz. (by order of "indirectness"): episodic associations, clan affiliations, place of death, place and time of death, identity of mother (or a more direct one which was not necessary here: identity of father).

4.5. Some Aspects of the Use of Pronominal Elements in Ngarinjin

The second example of "text indexicality" which I wish to cite here involves the use of pronominal elements in Ngarinjin.

Consider the following excerpt from an autobiographical account

which was given to me by X, an elderly Ngarinjin man, in the presence of Y, also a Ngarinjin man:

1. X: ŋin ŋiyamulu gura ŋaŋga
   'I' 1 sg.-'single man' 'walk' 1 sg. √a - past
2. yonja - yu . buna wuda ŋandumaŋa .
   'another'-lat. 'those' 'give wife' 1 sg. - 3 pl. - √ma(ra)-past
3. gura njayaŋgari yilura - ŋari .
   'walk' 1 pl. ex.-√a-past-du. 'for good'
4. di - yu barudu mindi njarwiljeŋga .
   'then' 'bush war' 'there' 1 pl. ex.- √wilja - ref. - past
5. di - yu darangal bundongara .
   'then' 'spear' 3 pl. - 3 pl. - $\sqrt{w_1}$ - pres 1 sg. d.b.

6. Y: amalŋi njindi
   'auntie'-1 sg. 'she'

Free translation:

X: I went, as a single man, to another clan territory. Those people gave me a wife. She and I left that area for good. Then we and some other people got into a war with one another. She was speared (literally: they spear them on me).

Y: My auntie, that woman.

One thing illustrated by this passage is the way in which the obligatory pronominal elements in the verb often stand as the only overt manifestation of its major adjunct NPs within the sentence (cf. p. 188). This is true of X's last three sentences here. In all three of those sentences, all of the pronominal elements on the verbs function as indices

of something which lies outside of the sentence in which the verb occurs.

But where do they point and how do they do so? In general (but see pp. 204ff. for some complications), participants in the speech event are indexed within the "personal" categories, and non-participants with the so-called "third person" categories. Within the latter, some elements are primarily "text-indexical," pointing to something in the flow of speech and some are primarily "context-indexical," pointing to something in the non-linguistic context.

The way in which each of these kinds of pointing takes place can be complex, and is rendered even more complex by interactions among the three.

To see what I mean, consider the functioning of pronominal elements in each of the verbs in X's last three sentences.

The subject of the verb njayangari (in the third line) is marked as first person dual exclusive, a category which combines "personal" indexicality with non-personal. It signals that there are two people involved, one of whom is the speaker, and the other of whom is not an addressee in this speech event. For the identity of that second "non-participant," we must look to the linguistic context. This cannot be a matter of simply looking for an earlier co-referent 3 sg. noun phrase, for in this case, there is none. Rather, we must have recourse to something like a "meaning postulate" by which, among the Ngarinjin, the use of the verb wuḍa + √ma(ra) 'to bewife', establishes, for that discourse, an implied referent wife.

Likewise, baṛudu 'bush war' in the next sentence (line 4) entails the presence of combatants, who are not otherwise referred to in the discourse, but who nonetheless are indexed (along with the speaker) by the first person plural subject pronominal element on the verb.

Those combatants are also indexed as the subject of the verb in the next sentence (line 5). Here, since the plural subject element is a "third person" one, the speaker is excluded. The speaker is indexed instead by a "dative-benefactive" suffix (see sec. 2.2.1.2), indicating that he was "affected" by the action described by the verb.

But what about the object of that verb? There is, of course, no object NP present within the sentence, so we must look for it in previous discourse. But we will not find it there unless we are aware of a particular set of cultural rules governing language use among the Ngarinjin.

The rule which is relevant here is a part of the "death taboo" complex discussed above (pp. 263ff.). The wife of X is, of course, deceased. For the widow or widower of a deceased person, the ban on referring to that person is especially strong. As can be seen in A's first two attempts in the death taboo sequence above (p. 262), there is always a preference for "including" the deceased person among the referents indexed by a non-singular pronominal form, rather than using a singular one. For widows and widowers, this preference is solidified into a prescribed usage whereby the deceased spouse can only be referred to by means of non-singular pronominal forms, even where no other referent is included.

Thus X, in telling of the death of his wife, says, literally: "So then they spear them on me."

His Ngarinjin interlocutor, Y, picks up the reference immediately, even though the deceased wife has never been explicitly referred to. As a non-spouse he is free to refer to her (but only indirectly) in the singular, which he does, commenting that she was his "auntie."

Note the close interaction here among all three kinds of

indexicality mentioned above: the personal, the text-indexical, and the context-indexical. The text-indexical linkage of X's 3 pl. pronominal form in turn indexes an aspect of the relationship between speaker and text referent within a particular culturally defined context. In such cases, the context-indexical linkage must be seen as a precondition for the text-indexical one: X's last two sentences would not cohere to form "text" outside of this particular cultural context.

What we can conclude from examples such as this is that the study of text is one which is best pursued within the framework provided by a broader theory of the relationship between text and context.

REFERENCES

Allen, W. S. 1964. Transitivity and possession. Language 40: 337-53.

Bar-Hillel, Y. 1954. Indexical expressions. Mind 63: 359-76.

Benveniste, E. 1948. Noms d'agent et noms d'action en Indo-European. Paris: Adrien-Maisonneuve.

Bloomfield, L. 1926. A set of postulates for the science of language. Language 2: 153-64.

Bloomfield, L. 1933. Language. New York: Holt, Rinehart, and Winston.

Capell, A. 1939. Mythology in the Northern Kimberley, northwest Australia. Oceania 9: 382-404.

Capell, A. 1972. The languages of the Northern Kimberley, W. A.: some structural principles. Oceania 43: 54-65.

Capell, A., and Elkin, A. P. 1937. The Languages of the Kimberley division. Oceania 8: 216-46.

Chomsky, N., and Halle, M. 1968. The Sound Pattern of English. New York: Harper and Row.

Chomsky, N., and Lasnik, H. 1977. Filters and control Linguistic Inquiry 8: 425-504.

Coate, H., and Elkin, A. P. 1974. Ngarinjin-English dictionary. Sydney: University of Sydney (Oceania Linguistic Monographs, # 16).

Coate, H., and Oates, L. 1970. A grammar of Ngarinjin. Canberra: Australian Institute of Aboriginal Studies (Australian Aboriginal Studies, # 25).

Daneš, F. 1970. Zur linguistischen Analyse der Textstruktur. Folia Linguistica 4: 72-78.

Dijk, T. van. 1972. Some aspects of text grammars. The Hague: Mouton (Janua Linguaram, Series Maior, # 63).

Dixon, R. M. W. 1972. The Dyirbal language of north Queensland. Cambridge: Cambridge University Press.

Dixon, R. M. W. (ed.). 1976. Grammatical categories in Australian languages. Canberra: Australian Institute of Aboriginal Studies.

Dixon, R. M. W. 1977. A grammar of Yidiɲ. Cambridge: Cambridge University Press.

Dixon, R. M. W. forthcoming. Ergativity. To appear in Language.

Douglas, W. 1964. An introduction to the Western Desert Language. Sydney: University of Sydney (Oceania Linguistic Monographs, # 4).

Dressler, W. 1972. Einführung in die Textlinguistik. Tübingen: Niemeyer.

Firbas, J. 1974. Some aspects of the Czechoslovak approach to problems of functional sentence perspective. Papers on Functional Sentence Perspective, (ed.) Danes, F., pp. 11-37. Prague: Academia.

Grimes, J. 1975. The thread of discourse. The Hague: Mouton.

Gudschinsky, S. 1959. Discourse analysis of a Mazatec text. International Journal of American Linguistics 25: 139-46.

Hale, K. 1976. 'The adjoined relative clause in Australia,' pp. 78-105 in Dixon, R. M. W. (ed.) 1976. Grammatical categories in Australian languages. Canberra: Australian Institute of Aboriginal Studies.

Halliday, M. A. K., and Hasan, R. 1976. Cohesion in English. London: Longmans.

Harris, Z. 1951. Structural Linguistics. Chicago: University of Chicago Press.

Harris, Z. 1952. Discourse analysis. Language 28: 1-30.

Harris, Z. 1962. String analysis of sentence structure. The Hague: Mouton.

Hartmann, P. 1968. Textlinguistik als linguistische Aufgabe. Konkrete Dichtung, Konkrete Kunst, (ed.) Schmidt, S., pp. 62-77. Karlsruhe: Privatdruck.

Hartmann, P. 1971. Text als linguistisches Objekt. Beitrage zur Textlinguistik, (ed.) Stempel W., pp. 9-30. Munich: Fink.

Harweg, R. 1968. Pronomina und Textkonstitution. Munich: Fink.

Heath, J. 1975. Some functional relationships in grammar. Language 51: 89-104.

Heidolph, K. E. 1966. Kontextbeziehungen zwischen Sätzen in einer generativen Grammatik. Kybernetika Cislo 3: 273-81.

Hercus, L. 1969. The languages of Victoria: a late survey. Canberra: Australian Institute of Aboriginal Studies.

Hjelmslev, L. 1935. La catégorie des cas. Etude de grammaire générale. Acta Jutlandica 7: 1, 9:2.

Isenberg, H. 1968. Überlegungen über Texttheorie. Linguistik und Literaturwissenschaft, (ed.) Ihwe, J., pp. 150-72. Frankfurt a/M: Athenäum.

Jakobson, R. 1957. Shifters, verbal categories, and the Russian verb. Cambridge: Harvard University Press.

Jakobson, R., Fant, C., and Halle, M. 1951. Preliminaries to speech analysis: the distinctive features and their correlates. Cambridge: M.I.T. Press.

Jones, D. 1966. The pronunciation of English. Cambridge: Cambridge University Press.

Jones, D. 1969. An Outline of English Phonetics. Cambridge: W. Heffer and Sons.

Keenan, E., and Comrie, B. 1977. Noun phrase accessibility and universal grammar. Linguistic Inquiry 8: 63-99.

Kuryłowicz, J. 1966. La nature des procès dits "analogiques." Readings in Linguistics II, (eds.) Hamp, E., Householder, F., and Austerlitz, R., pp. 158-74. Chicago: University of Chicago Press.

Ladefoged, P. 1971. Preliminaries to linguistic phonetics. Chicago: University of Chicago Press.

Longacre, R. 1971. Philippine discourse and paragraph studies in memory of Betty McLachlin. Canberra: Australian National University.

Lyons, J. 1969. Introduction to Theoretical Linguistics. Cambridge: Cambridge University Press.

McKenzie, M. 1969. The Road to Mowanjum. Sydney: Angus and Robertson.

Palek, B. 1968. Cross-reference. A study from hyper-syntax. Prague: Universita Karlova.

Partee, B. 1973. The syntax and semantics of quotation. A Festschrift for Morris Halle, (eds.) Kiparsky, P., and Anderson, S., pp. 410-18. New York: Holt, Rinehart, and Winston.

Petöfi, J. 1971. Transformationsgrammatiken und eine ko-textuelle Texttheorie. Frankfurt a/M: Athenäum.

Pike, K. 1943. Phonetics. Ann Arbor: The University of Michigan Press.

Pike, K. 1967. Language in relation to a unified theory of the structure of human behavior. The Hague: Mouton.

Pike, K., and Lowe, I. 1969. Pronominal reference in English conversation and discourse--a group theoretical treatment. Folia Linguistica 3: 68-106.

Reinhart, T. 1977. Review of van Dijk 1972. Language 53: 247-253.

Robins, R. H. 1967. A Short History of Linguistics. London: Longmans.

Rumsey, A., forthcoming. Prolegomena to a theory of Australian grammatical case systems. To appear in the Proceedings of the 1976 Biennial Conference of the Australian Institute of Aboriginal Studies. Canberra: Australian Institute of Aboriginal Studies.

Saussure, F. de. 1959. Course in general linguistics. New York: The Philoscphical Library.

Sayers, B. J. 1976. The sentence in Wik-munkan: a description of propositional relationships. Canberra: Linguistic Circle of Canberra.

Schmidt, S. 1969. Bedeutung und Begriff. zur Fundierung einer sprachphilosophischen semantik. Braunschweig: Vieweg.

Schebeck, B. 1976. Are Australian languages syntactically nominative-ergative or nominative-accusative: Thangu and Atjinjamathanha, pp. 516-50 in Dixon, R. M. W. (ed.) 1976. Grammatical categories in Australian languages. Canberra: Australian Institute of Aboriginal Studies.

Silverstein, M. 1976. Hierarchy of features and ergativity, pp. 112-71 in Dixon, R. M. W. (ed.) 1976. Grammatical categories in Australian languages. Canberra: Australian Institute of Aboriginal Studies.

Watkins, C. 1967. Remarks on the genitive. To Honor Roman Jakobson, pp. 2191-98. The Hague: Mouton.

Whorf, B. L. 1956. Language, thought, and reality. Cambridge: M.I.T. Press.

Williams, E. 1977. Discourse and logical form. Linguistic Inquiry 8: 101-39.

Wittgenstein, L. 1963. Philosophical investigations. Oxford: Blackwell.