TIWI REVISITED

A reanalysis of

Traditional Tiwi verb morphology

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Submitted in total fulfilment of the degree of
Master of Arts (Linguistics)
December 2013

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For Anita Pangiramini, Justin Puruntatameri, and all people whose languages have gone silent.

May they and their words always be remembered.
Abstract

Traditional Tiwi is a language isolate within the Australian language group, traditionally spoken on the Tiwi Islands, north of Darwin. This language exhibits the most complex verb structure of any Australian language. Altogether there are 18 distinct verb slots; 14 prefixes and 4 suffixes. They encode subject, object and oblique arguments, they inflect for tense, aspect and mood, the location and direction of events with respect to the speaker, and the time of day that an event takes place. They also take prefixes and suffixes denoting associated motion, can be argument-raised by a causative or detransitivised by derivational morphology, and can take incorporated nominals, incorporated verbs, and incorporated comitative or privative arguments.

Traditional Tiwi has not been adequately described. Previous descriptions are limited and do not cover verb morphology with enough detail. This thesis brings together previous descriptions, early recorded data, and adds newly collected data and findings to produce an updated description of the language, with special reference to the verb morphology.

I focus in particular on two aspects of the verb morphology: agreement and incorporation. The Traditional Tiwi agreement system of inflecting verbs shows a high degree of complexity due to the interactions between subject, object and tense marking. I argue for the occurrence of an otherwise unreported phenomenon by which agreement affixes can shift between various controllers depending on the morphosyntactic context. Incorporation is also highly complex, as with other northern Australian languages that exhibit this feature. There are four distinct types of incorporation including verb incorporation, comitative and privative constructions, body part incorporation and regular nominal incorporation. I describe these with reference to incorporation phenomena in other Australian languages.

Traditional Tiwi however, is no longer spoken; the last two speakers died in 2012. The majority of the data on which this thesis is based was collected with one of these two last speakers, and therefore represents possibly the last documentary linguistic record of this important language.
Declaration

This is to certify that:

1. the thesis comprises only my original work towards the degree of Masters,
2. due acknowledgement has been made in the text to all other material used,
3. the thesis is less than 30,000 words in length, exclusive of examples, tables, maps, bibliographies and appendices.

Aidan Wilson
Acknowledgements

There are many people without the support of whom this thesis would not have been written.

First and foremost I thank my two brilliant supervisors, Rachel Nordlinger and Gillian Wigglesworth, for being a formidable team, for knowing exactly when and how I needed pushing, and for ensuring that I was able to finish.

To Tim McNamara, I extend my personal thanks for support in difficult times, and also to each of my colleagues in the department, in particular the ‘Langdoc’ lab, for providing me with constant encouragement and occasional catharsis. I also thank Lauren Gawne in particular for making a simple suggestion that kept this entire project from coming to a premature end.

I also thank the department generally and the University of Melbourne for the institutional support without which research in Indigenous Australia would be all but impossible. This project was conducted with the support of two research grants: the Aboriginal Child Language Acquisition (phase 2) project, funded by an Australian Research Council grant (DP 0877762), and the Traditional Tiwi project funded by an AIATSIS research grant (G2011/7667). The maps in this thesis were produced by Chandra Jayasuriya, and the data in the language boundary map was contributed by many researchers and collated by Mark Harvey (University of Newcastle). My thanks go to Chandra and Mark for their work.

To the entire PARADISEC team, particularly Linda Barwick and Nick Thieberger, thanks for keeping me employed, and being flexible with my long periods of concentrating on other things.

Lorenzo, padrone, I owe you thanks for being my mentor on the islands and my representative when I could not be there. Thanks also to the Nguiu Aged Care facility for allowing me to visit just about every day, and for not neglecting me when it came to the residents’ meal times.
Elisha, I may not have been able to accomplish this without your continued patience, support and, above all, love. It was not easy for us both to have theses to wrestle, and for us to have been so far away from each other for these last three years while doing so.

To the Tiwi people, I extend my warm and heartfelt thanks for inviting me into your country and into your culture. To nginyiminini, my brother-in-law, Gordon, thank you for introducing me to your people. Bede Tungutalum, for naming me Payamarnuwa, I owe you a debt of gratitude. To the ladies in the literacy centre, Tara, Kalei and especially Maggie, thank you for giving me a place to work, and helping to educate me about Tiwi history and culture. To Molly and Jamie-Lee, thank you for enduring the cold weather in Melbourne and assisting me with my research.

Finally, and most importantly, to Anita, my grandmother and teacher. Maningawu, I’m sorry that I couldn’t show you the result of our work together. I am forever grateful that you taught me your language and spent so much time with me in what turned out to be your last months. Your infectious laughter I will remember fondly. This thesis is dedicated to you.
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1 The data on which this map is based was contributed by many researchers and collated by Mark Harvey, University of Newcastle (2008).

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## List of Abbreviations

<table>
<thead>
<tr>
<th></th>
<th>First person</th>
<th>IPFV</th>
<th>Imperfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Second person</td>
<td>IRR</td>
<td>Irrealis</td>
</tr>
<tr>
<td>3</td>
<td>Third person</td>
<td>ITER</td>
<td>Iterative</td>
</tr>
<tr>
<td>1/2</td>
<td>First and second person</td>
<td>LOC</td>
<td>Locative</td>
</tr>
<tr>
<td>A</td>
<td>Class A</td>
<td>M</td>
<td>Masculine</td>
</tr>
<tr>
<td>B</td>
<td>Class B</td>
<td>MIN</td>
<td>Minimal number</td>
</tr>
<tr>
<td>AM</td>
<td>Associated motion</td>
<td>MORN</td>
<td>Morning</td>
</tr>
<tr>
<td>AUG</td>
<td>Augmented number</td>
<td>NEG</td>
<td>Negative</td>
</tr>
<tr>
<td>ASS</td>
<td>Associative</td>
<td>NFUT</td>
<td>Non-future tense</td>
</tr>
<tr>
<td>CAUS</td>
<td>Causative</td>
<td>NPST</td>
<td>Non-past tense</td>
</tr>
<tr>
<td>COM</td>
<td>Comitative</td>
<td>O</td>
<td>Object</td>
</tr>
<tr>
<td>COMP</td>
<td>Complementiser</td>
<td>OBL</td>
<td>Oblique</td>
</tr>
<tr>
<td>COMPL</td>
<td>Completative</td>
<td>OBLIG</td>
<td>Obligative</td>
</tr>
<tr>
<td>CONJ</td>
<td>Conjunction</td>
<td>PL</td>
<td>Plural</td>
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<tr>
<td>CV</td>
<td>Connective</td>
<td>PRIV</td>
<td>Prative</td>
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<td>DEM</td>
<td>Demonstrative</td>
<td>PREP</td>
<td>Preposition</td>
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<tr>
<td>DIST</td>
<td>Distal</td>
<td>PROX</td>
<td>Proximal</td>
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<td>DUR</td>
<td>Durative</td>
<td>PST</td>
<td>Past tense</td>
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<td>EVE</td>
<td>Evening</td>
<td>Q</td>
<td>Question</td>
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<tr>
<td>F</td>
<td>Feminine</td>
<td>RECP</td>
<td>Reciprocal</td>
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<td>FRUST</td>
<td>Frustrative</td>
<td>REFL</td>
<td>Reflexive</td>
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<tr>
<td>FUT</td>
<td>Future</td>
<td>S</td>
<td>Subject</td>
</tr>
<tr>
<td>HITH</td>
<td>Hither</td>
<td>SG</td>
<td>Singular</td>
</tr>
<tr>
<td>IMP</td>
<td>Imperative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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= Indicates clitic boundary
- Indicates morpheme boundary
_ Separates multiple English words within same lexical gloss (e.g., be_deaf)
> Denotes direction of transitivity or possession (e.g., 3MIN>3MIN.M ‘S/he did it to him’)
 CHAPTER 1

Introduction

Traditional Tiwi is a language isolate which has not been demonstrated to be genetically related to any of the established Australian language families, although all classifications agree that it is within the broad Australian language group. Spoken traditionally on the Tiwi Islands, north of Darwin, in Australia’s top end, the Tiwi Islands are geographically isolated from the mainland, and all evidence indicates that the Tiwi people never had sustained contact with anyone outside the islands until the twentieth century. Having developed in isolation for potentially thousands of years, Tiwi is now considerably linguistically different from any neighbouring language.

The language exhibits a morphologically rich, polysynthetic verbal word, which has been called the most complex verb among Australian languages (Dixon, 2002:408). The verb has 14 prefix positions and 4 suffix positions, shows agreement for both subject and object, inflects for tense, aspect and mood, and marks several other semantic categories such as distance from the speaker, associated motion and the time of day that an event takes place. It
also exhibits incorporation of both nominal and verbal elements, and often both at once, and furthermore, nominals can incorporate into comitative and privative constructions.

Traditional Tiwi is an exclusively head-marking language; dependent noun phrases are not marked as to their grammatical function, and the order of constituents in a clause is not related to grammatical roles, but is pragmatically determined. Moreover, free pronouns are not marked, nor do they have distinct forms for different syntactic functions. Grammatical roles are determined entirely by verb prefixes that agree for person, number and gender with subjects, objects and obliques.

The verb in Traditional Tiwi is therefore central to the grammar as it marks all grammatical functions as well as a range of other categories from tense, aspect and mood through to direction, location and time of day. As a result, a typical verb, as exemplified below, can be incredibly long, and is often the only overtly realised element in a sentence.

(1) a- mpi- ni- watu- wujingi- ma- jirrakirningi- angurlimayi -ami
3MIN.F- NPST- LOC- morn- DUR- COM- light- walk -MV
‘she (the sun) is shining over there in the morning’
(lit: she is walking over there in the morning with a light.)
(Lee, 1987:2)

Despite the fact that Traditional Tiwi verbs are particularly morphologically complex, they have not been comprehensively investigated. The only two previous descriptions of Traditional Tiwi (Osborne, 1974; Lee, 1987) leave many questions unanswered with respect to verb morphology in particular. The central aim of this thesis is to build on and supplement these descriptions by introducing new data and enriching pre-existing data with transcriptions and annotations. This thesis is intended to complement these descriptions by specifically addressing the verb morphology.

There are several aspects of the Traditional Tiwi inflecting verb that have been problematic for previous linguistic descriptions. Subject and object agreement prefixes for example, interact with each other and with tense prefixes in seemingly unsystematic ways. Example (2) illustrates the regular behaviour of the prefixes. The first element in the verb, ngi-, denotes the subject, while the object pronoun, mani-, is expressed closer to the verb stem.²

² The initial consonant of the verb stem papunya ‘follow’ assimilates in place to the final consonant of the preceding object bound pronoun. Thus in example (2), it becomes an apico-alveolar t due to the apico-alveolar n in mani-.
Where the verb encodes a 3rd person minimal object, however, the agreement system undergoes some structural changes. 3MIN objects are not overtly represented by agreement markers, although their presence is observed by the effect they have on tense markers. In (3), the expected tense marker that agrees with this subject, as illustrated in (2), is *rr*- however *nti*- is used instead, which indicates the presence of a 3rd person minimal feminine object.

This phenomenon is made more complex with the occurrence of portmanteau subject/tense prefixes. The subject marker *ji*, for example, ordinarily encodes a 3rd person minimal feminine subject and past tense, as shown in (4).

However when the verb encodes a 3rd person minimal object, the subject loses its gender specification to that object, leaving the subject ambiguous for gender.

In other words, the gender category of the subject marker has shifted to agreeing with the object. I call this phenomenon ‘Agreement Shift’ and show in this thesis that while the behaviour of agreement morphology appears erratic, it is actually quite systematic. Furthermore, I provide an analysis that accurately predicts where such behaviour occurs.
today, the lingua franca of the Tiwi Islands is a modernised version of the language, Modern Tiwi, that does not exhibit the same linguistic phenomena, particularly the extremely morphologically rich inflecting verb described above. During much of this time, Modern Tiwi and Traditional Tiwi coexisted on the Tiwi Islands, with elderly people speaking the traditional form of the language, and younger people speaking the modernised form.

In 2012, the last two full speakers of Traditional Tiwi died, and it ceased to be a spoken language. There remain a handful of Tiwi people who can understand the language but there is no one left who can speak it fluently in its more traditional form. The majority of the corpus on which the present study is based was provided by one of these last two speakers shortly before she died; it therefore contains the last recordings of a full speaker of the Traditional Tiwi language.

1.1 Outline

Chapter 2 will introduce the Tiwi people and the Tiwi language in its historical context. As it is a language spoken on an island, Tiwi developed for a long time in geographic isolation from other languages. In fact it was not until the twentieth century that the Tiwi people had extended contact with any speakers of languages other than Tiwi. But, as this chapter will describe, the high level of contact in the last century resulted in the formation of a new language and led to the Tiwi people gradually moving away from speaking the traditional form of the language.

Chapter 3 outlines the methodology of the present study. This chapter will also describe the corpus of recordings and written sources on which this study is based. The recorded corpus comprises new data collected by me for the purposes of the current description, as well as earlier recordings that I obtained and retranscribed.

Chapter 4 presents a Summary of the previous descriptions of the language, with particular focus on the major descriptions of Traditional Tiwi (Osborne, 1974) and Modern Tiwi (Lee, 1987). The purpose of this Summary is firstly, to provide the reader with the linguistic context required for the analysis presented in later chapters, and secondly, to indicate the
remaining gaps in the knowledge of the language and therefore argue the case for further
description of Traditional Tiwi.

Chapter 5 provides a full description of the inflecting verb. Throughout this chapter, new
analyses on specific areas of the verb template are presented and fully exemplified with
primary data from the corpus.

Chapter 6 looks closely at agreement morphology and tense prefixes, which have been
problematic for earlier descriptions. Subject and object prefixes exhibit considerable
complexity. This chapter presents an analysis that improves significantly on previous
descriptions.

Chapter 7 presents a description of incorporation. Traditional Tiwi exhibits incorporation of
four types: body part noun incorporation, generic nominal incorporation, verbal incorporation,
and comitative and privative constructions. These four types are described and exemplified
with examples from the corpus, and discussed in the context of accounts of incorporation
cross-linguistically.

Finally, chapter 8 summarises the findings of this study and concludes the thesis.

1.2 Scope of this thesis

Traditional Tiwi inflecting verbs are incredibly morphologically complex. Despite this, they
are still only barely described in any detail, and only poorly understood.

The aim of this thesis is to improve our understanding of the Traditional Tiwi language, and
provide an updated analysis of Traditional Tiwi verb morphology. The scope of this thesis is
therefore restricted to the domain of the inflecting verb and the phenomena that it exhibits.
Other areas of the language are nonetheless covered, albeit in less detail, where they directly
or indirectly affect the analysis of the inflecting verb. For this reason, an overview of the
current understanding of Traditional Tiwi grammar outside the verb is provided in chapter 4,
before the inflecting verb itself is discussed in detail in chapter 5.

There are some aspects of Traditional Tiwi grammar that are not within the scope of the
present study. These include certain questions relating to phonetics, phonology and
phonotactics, as well as areas of syntax like word order and phrase structure. The limiting factor in this case is not entirely a lack of data, but more the lack of space in this thesis. They are of course, areas of the language that should be covered in future, particularly if further data becomes available.

As discussed in §2.2.3, Traditional Tiwi is not the only form of the Tiwi language. Modern Tiwi remains a healthy language that is being acquired by children. It is however, structurally quite distinct from Traditional Tiwi and does not possess many of the typological features that I discuss in this thesis. The verb morphology of Modern Tiwi is therefore not within the scope of the present study.

1.3 Notes on examples

All example sentences provided through this thesis contain multiple tiers. Where the example is from my corpus of recordings (which comprises both Osborne’s and my own field recordings, see §3.2), the top tier represents the surface realisation of the utterance, transcribed phonemically. The second line contains the underlying morphological representation, as this may differ significantly from the surface realisation due to various phonological processes. The third line contains the morphemic gloss. The glosses used for each morpheme reflect my own analysis as presented in this thesis, unless stated otherwise. The last line, the free translation, most often reflects the stimulus, but in some instances, for example in textual data for which no such stimulus is immediately relevant, the free translation is my own English rendition of the Tiwi sentence. Finally, example sentences are all accompanied by references. The reference most often indicates where, and in which recording it can be found.

A typical example sentence would therefore look like the following.

(6) karluwu ngurritanga
karluwu  ngu- rri- ta- nga
NEG  IminS- PST- NEG- grab
‘I didn’t get it’ (AW_20120410_01: 00:15:53)

This indicates that the example occurs 15 minutes and 53 seconds into recording AW_20120410_01.
If the example is not from the recorded corpus but from a published source, then I have updated morphemic segmentation and glossing to reflect my own analysis, unless stated otherwise. When sourcing examples from published sources that do not have recordings associated with them, I have attempted to reconstruct the surface representation. This is often straightforward. Occasionally however, reconstructing the phonemic layer was more problematic. In those cases, the top tier contains the morphological representation instead.

Examples from published sources are accompanied by a reference to the source rather than to a recording:

(7) yi- mani- pirni
    3MIN S.M.PST-1MINO- hit
    ‘he hit me’ (Osborne, 1974:39)

All example sentences are of Traditional Tiwi unless otherwise indicated. Where example sentences contain other languages, such as Modern Tiwi for instance, the first line of the example will indicate the language:

(8) Modern Tiwi:
    weypim  pi- rri- mi  ngawa
    wave    3PL- PST- do1PL
    ‘they waved to us’ (Lee, 1987:276)

A list of abbreviations and conventions used in glosses is provided on page xii.

The next chapter will provide an overview of the Tiwi people, the Tiwi Islands, and introduce the Tiwi language.
The Tiwi people and their language

Traditional Tiwi is the ancestral language of the Tiwi people, who live on the Tiwi Islands and Darwin, in Australia’s far north.

Prior to European settlement in 1911, the Tiwi people were isolated from mainland Aboriginal people, due to both geography and the Tiwi people’s hostility to outsiders. This isolation from the mainland enabled the Tiwi language to develop on its own for what could have been thousands of years, and today, the language bears almost no lexical resemblance, and very little structural resemblance to any nearby languages. In addition there is evidence from genetics and anthropology that further corroborates the geographic and cultural isolation of the Tiwi.

This chapter will describe the Tiwi people and their traditional lands, as well as providing an overview of the Tiwi language in terms of its genetic classification and typological profile.
Finally, it will outline the linguistic situation on the Tiwi Islands today, as it has changed dramatically in the century since settlement.

2.1 The Tiwi people

There are around 3000 Tiwi people. Most live on the Tiwi Islands while some live in Darwin, and elsewhere in the top-end.

Hart & Pilling (1960:10) claim that the Tiwi people never considered themselves to be distinct from any other people due to their isolation and not knowing of the existence of other people. They therefore never had a term to refer to themselves as a group distinguished from others; the word Tiwi itself simply means ‘people’ (compared with tini ‘man’ and tika ‘woman’). The word Tiwi was first used as a demonym to refer to the indigenous inhabitants of Bathurst and Melville Islands by C. W. M. Hart (1930:169). Today its use is ubiquitous as both a term for the people and for the language.

Traditionally, the Tiwi people lived in groups based on patrilineal affiliation. These groups were associated with traditional lands throughout the Tiwi Islands. Today, each Tiwi person maintains a strong connection to their patrilineal group and to their land.

Within the Tiwi Islands local government area, “Tiwi” is overwhelmingly the most reported language spoken at home (77.1% of the total population) and only 9.2% of people within the islands who identify as indigenous indicated that they speak English at home (Australian Bureau of Statistics, 2012).

2.1.1 Location

The Tiwi Islands are made up of Bathurst and Melville Islands, as well as a number of smaller uninhabited islands, all of which lie less than 20km off the northern coast of Australia in the Arafura Sea, directly north of Darwin. Bathurst Island is around 1,700 sq km and is located to the west. Melville Island, at around 5,800 sq km is the second largest island in Australia, after Tasmania (see map 1 on page xiii).

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3 The census does not differentiate between Traditional and Modern Tiwi.
4 The census does not ask for specific ethnic group affiliation. This figure therefore includes all Aboriginal and Torres Strait people living in the Tiwi Islands.
The islands are separated from each other by Apsley Strait, which varies in width throughout its 62km length between 550m at its narrowest and 5km at its widest. Several smaller, uninhabited islands are also claimed as part of the Tiwi Islands, including Yirrapurlingaŋgi, Buchanan Island, at the southern entrance of Apsley Strait, and the three Vernon Islands, Muma, Walapanji and Punarliyi, located off the southern tip of Melville Island (Ward, 1990:11). The Tiwi Islands are separated from the mainland by the relatively shallow Van Diemen Gulf, and two straits: the Dundas Strait separating Melville Island from Cobourg Peninsula, and the Clarence Strait separating Melville Island from the area to the immediate north-east of Darwin, across the Vernon Islands.

With a total population of around 1,500, Wurrumiyanga (formerly Nguiu) is the largest settlement and is located at the south-eastern tip of Bathurst Island. Wurrumiyanga contains most of the administrative bureaucracy, including a Centrelink office, the council offices and several businesses including the social club, store and take-away, arts and crafts businesses, and clothing manufacturer. The next largest townships are Milikapiti, on Melville Island with a population of around 500 people, and Pirlangimpi, also on Melville Island, with around 400 people. In addition there are several small townships throughout the two islands and a number of outstations.6

2.1.2 Geographic and cultural isolation

The Tiwi people maintain a belief that they had no contact with mainland Aboriginal people until the twentieth century (Hart & Pilling, 1960:9). Just how long the Tiwi were in isolation before this is not clear. One estimate is that the Tiwi were isolated since the last ice age (between 20-15,000 years BCE: Forrest, 1995:6). A more conservative estimate is that they have been separated from other Australian Aboriginal groups for six to seven thousand years (Singer, 2006:267). Even the most conservative estimates would mean that the Tiwi language developed in isolation over an extraordinarily long period of time.

While only 17km of sea separates Melville Island from the mainland at the narrowest point, across the Vernon Islands, there is little evidence that the Tiwi and mainland Aboriginal

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5 Centrelink is the trading name for Australia’s federal department responsible for the disbursement of welfare.
6 Outstations were originally outposts of cattle ranches more than one day’s travel from the homestead, but more recently the term has come to refer to small settlements of Aboriginal people traditional lands.
groups had much contact between them. According to Hart & Pilling (1960:9), there was no such contact at all:

[The distance between the Tiwi Islands and the mainland] is slightly greater than the distance that separates England from France at the Straits of Dover, and just as the dim outline of coastal France can be seen from England on clear days, so the dim outline of the Australian mainland can be seen from the southern edges of the islands. However, Tiwi tradition is firm and certain that before the white man’s arrival there was no contact between the islands and the mainland. (Hart & Pilling, 1960:9)

The Tiwi considered the mainland, which they called Tibambinuni, to be the home of the dead (Hart & Pilling, 1960:9). They were also openly hostile to invaders from any direction, either from the mainland or from the north and as such, violently resisted settlement by Europeans (MacKnight, 1972:290).

Despite the narrow breadth of the straits that separate the islands from the mainland, the waters are dangerous and the Tiwi did not typically attempt to cross. The Tiwi people today see themselves as culturally, linguistically and ethnically distinct from mainland Aboriginal people, and evidence from multiple sources, such as genetics, ethnography and linguistics, is consistent with this.

Genetic studies demonstrate that the Tiwi are relatively more distant from mainland groups than those mainland groups are to each other (Kirk, Sanghvi, & Balakrishnan, 1972; S J Walsh & Eckhoff, 2007). In addition, the Tiwi lack many of the cultural tools and artefacts that are otherwise ubiquitous among the northern coastline Aboriginal groups, such as boomerangs and woomeras. Hart & Pilling (1960) take this as evidence that there was little contact between the islands and the mainland.

Several characteristic features of mainland native technology were absent on Melville and Bathurst Islands, notably the spear thrower and the curved (or return) boomerang. To anthropologists, the idea of an Australian tribe lacking spear throwers and curved boomerangs is almost a contradiction in terms, and the only feasible explanation is isolation and hence failure of these mainland traits to diffuse to the islands. (Hart & Pilling, 1960:10)

Linguistic evidence (outlined in §2.2.2) shows that Tiwi is undoubtedly an Australian language, and bears some similarities with neighbouring language families, such as Iwaidjan.
and Gunwinyguan. Lexical similarity between Tiwi and neighbouring languages however, is very low which according to Osborne (1974:2), indicates a “very long period of isolation from mainland languages”.

2.1.3 Settlement

Prior to the arrival of Europeans in the region, the Tiwi Islands were frequented by Macassarese trepangers, who are known to have visited other areas of the Arafura coastline and traded with other Indigenous people, such as the Yolngu and the Iwaidja (MacKnight, 1976). The Macassarese, however, did not have much contact with the Tiwi people themselves. There are Macassan loanwords in Tiwi, such as *jimpala* ‘sail’ from Macassarese *sampala*, and *pirraja* ‘rice’ from Macassarese *barasa* (Osborne, 1974:152), but the number of borrowings in Tiwi is much less than in other languages such as Iwaidja (Evans, 1992:49). It is likely that these were borrowed from Iwaidja, rather than from Macassan directly.

The first attempt at settlement on the Tiwi Islands by Europeans was in 1824, when Fort Dundas was established on Melville Island on the Apsley Strait, near the modern-day town of Pirlangimpi (formerly Garden Point). Fort Dundas was at the time the third most populated settlement on the Australian continent (Pilling, 1965:312), but was abandoned in March 1829 less than five years after it was established. The British made very little impact on the Tiwi during this period, although the buffalo they brought remained and populated Melville Island, but never managed to cross the strait. Buffalo remain abundant on Melville Island today, but are completely absent on Bathurst Island.

Attracted by the lucrative resource represented by the then numerous buffalo, in 1895 a team of hunters led by Joe Cooper set up camp on Melville Island. They were met with open hostility from the Tiwi however, and Cooper himself was speared, forcing the team to retreat to the mainland (Hart & Pilling, 1960; Bauer, 1981). Cooper took four Tiwi people with him so that they could teach him and his team the language. He returned to Melville Island in 1905 with a small party of armed Iwaidja men. He sent the Iwaidja to the islands first to establish contact and friendly relations before himself arriving onshore, which he then did without resistance from the Tiwi (Bauer, 1981).
Cooper remained on Melville Island until around 1915, although the exact reason for his eventual leaving the islands is not clear. During these years there was extensive contact between his Iwaidja men and the local Tiwi people. Many of the Iwaidja took Tiwi women as wives (Hart & Pilling, 1960:101), often given to them by the women’s male relatives, who had an obligation to find husbands for the widows under traditional Tiwi marriage law (see Hart & Pilling, 1960:18-21 for a full account of pre-settlement Tiwi marriage practices).

One of Cooper’s camps on Melville Island was located at Paru, on the Apsley Strait directly across from the site that was to become the Roman Catholic mission. While he stayed there, he hosted several visitors to the islands, including Francis Xavier Gsell, the founder of the mission (see below), and Baldwin Spencer. Spencer’s (1914:14) account of Cooper is that he had lived with the Tiwi for so long that he knew them and was “entirely trusted by them”. He also credits Cooper with being the first European to establish friendly relations with the Tiwi:

> It is not too much to say that it is due to him that white men can now land, with impunity, on Melville and Bathurst Islands. (Spencer, 1914:14)

Cooper’s presence on the islands had a significant impact on the Tiwi, not in the least because it opened them up to further settlement from the mainland as Spencer argues, but also because of the resulting contact between the Iwaidja and the Tiwi, which has resulted in a significant number of loanwords from Iwaidja, such as karluwu ‘no’, makamaka ‘mother-in-law’ and mariji ‘rainbow’, as well as possibly dozens of words that Iwaidja had borrowed from Macassarese for introduced items, like jimpala ‘sail’ and pirraja ‘rice’. The linguistic evidence is therefore consistent with the aforementioned folk belief that the Tiwi were hostile to all outsiders, including Maccassans.

In 1911, Francis Xavier Gsell established a Roman Catholic Mission at Nguiu (later Wurrumiyanga). The mission was apparently welcomed by the Tiwi and Gsell managed to convert many Tiwi people to Catholicism. Today, the vast majority of Tiwi people are Catholic (Australian Bureau of Statistics, 2012), although they have developed their own version of Catholicism that has been merged with traditional Tiwi spirituality (Gardiner, 1993).

7 The Catholic Missionary, Gsell (1956), claims that he, along with the Tiwi, had Cooper’s hunting rights revoked by the government, while Cooper’s biographer, Bauer (1981), claims that he left voluntarily when an employee had complained about his and his men’s ‘intimidating’ behaviour towards the Tiwi.
Gsell (1956) claims that one of the major reasons for the successful conversion of the Tiwi people is that it was undertaken with constant sensitivity towards the people, their culture and language. Gsell claims that the site that he chose for the mission was not previously claimed by any of the Tiwi clans, as he did not want to either offend those who claimed affiliation or ostracise those who were from different country. He also never forcibly converted any Tiwi people, but allowed the Tiwi to gradually come to him.

However, although the mission was culturally sensitive, it was still responsible for the extent of linguistic contact between English and Tiwi. Osborne (1974:4) points out that when he visited the islands in 1966, English was the language of education at the mission and other settlement schools. The degree of contact between these languages, as shown in the next section, has led to the decline of the Traditional Tiwi language and the eventual emergence of Modern Tiwi.

2.2 The Tiwi language

The language traditionally spoken on the Tiwi Islands, before their settlement by Europeans in the early twentieth century, is referred to throughout this thesis as ‘Traditional Tiwi’, following Lee (1987:9). Tiwi people also use the terms ‘Old Tiwi’ and ‘Hard Tiwi’. There is another form of the language spoken on the Tiwi Islands, which the Tiwi refer to simply as ‘Tiwi’, but which I refer to, following Lee (1987), as ‘Modern Tiwi’. This modernised form of the language differs significantly from Traditional Tiwi in many areas, most substantially in verb morphology. Modern Tiwi will be described briefly in §2.2.3, but for a more thorough account, see Lee (1987).

Traditional Tiwi has been steadily declining in use since as far back as 1960 as Modern Tiwi gradually emerged as the dominant language on the Islands. Today, Traditional Tiwi is no longer spoken. I will hereafter use the terms ‘Tiwi’ and ‘Traditional Tiwi’ interchangeably to refer to the traditional form of the language, and ‘Modern Tiwi’ when I refer to the modernised form.
2.2.1 Typological profile

Traditional Tiwi is typical of a northern Australian language in that it has a phonemic inventory that closely resembles other Australian languages; it is prefixing; and it obligatorily marks subjects, objects and oblique arguments on the verb by way of agreement prefixes. Tiwi is a polysynthetic language as defined by M. Baker (1996) in that all arguments subcategorised for by the verb are marked on the verb.

Tiwi distinguishes five consonantal places of articulation with a nasal and an oral stop at each and, as with many Australian languages, Tiwi lacks a voicing contrast. Tiwi also has a velar fricative, which is an outlier in the system, and unusual for Australian languages, although neighbouring languages, such as Iwaidja (Pym & Larrimore, 1979) and Mawng (Singer, 2006), possess a similar segment. Tiwi reflects the three-vowel system that Dixon (2002:552) notes is the canonical Australian vowel system.

Nominals inflect for the gender and number of their referent. Singular nominals are marked for gender while plural nominals are not. This leaves a three-way contrast between masculine singular, feminine singular, and plural (see §4.2.1). Impersonal pronouns and demonstratives behave in the same way as nominals with respect to gender and number.

Tiwi is typical of non-Pama-Nyungan languages in that the bulk of the grammatical information in a clause is expressed morphologically on the verb, rather than syntactically. Tiwi completely lacks dependent marking and free pronouns do not differ in form depending on their grammatical function. Moreover, there is no fixed word order with respect to subject and object noun phrases.

Subject and object bound pronouns in Tiwi resemble other systems in northern Australia in that they are prefixed to the verb (Dixon, 2002:339). Pronouns, both independent and bound, contrast minimal and augmented number rather than singular and plural (see §4.2.2).

The verb is predominantly prefixing, with 14 verbal prefixes. Suffixation, with only four positions, is relatively limited. In addition to contrasts for tense, aspect and mood, the verb can mark the time of day, either morning or evening, that an event occurs, and the distance from the speaker or the direction with respect to the speaker. Interestingly, although by no
means unique in Australia, Traditional Tiwi verbs can also take incorporated nominals encoding both body parts affected by an event as well as generic objects involved in the event, and incorporated verbs encoding events that occur simultaneously with the inflecting verb itself (see chapter 7).

2.2.2 Classification

The geographic isolation of the Tiwi Islands and the consequent isolation of the Tiwi people from other Australian Indigenous people led to the Tiwi language developing for potentially thousands of years without external influence. This long period of isolated linguistic development has resulted in a language that is very different from those on the mainland.

All classifications place Tiwi within the broad language area that is generally referred to as Australian languages. However, none further classifies it as being within any of the established Australian language families. All consider Tiwi to be an isolate (Dixon, 2002; O’Grady, Voegelin, & Voegelin, 1966; M Walsh, 1981; Wurm, 1972, 1994).

Harvey’s (2003) reconstruction of non-Pama-Nyungan pronominals puts Tiwi within the range of other northern pronominal systems. Table 1 directly compares the reconstructed non-Pama-Nyungan pronominal prefixes (Harvey, 2003:500) with the bound pronoun paradigm for Traditional Tiwi. It demonstrates that Tiwi closely resembles other northern Australian systems in this regard.

Table 1: Traditional Tiwi bound pronouns compared with bound pronouns reconstructed for non-Pama-Nyungan by Harvey (2003:500)\(^8\)

<table>
<thead>
<tr>
<th></th>
<th>non-Pama-Nyungan</th>
<th>Tiwi</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>*nga-</td>
<td>ngi-</td>
</tr>
<tr>
<td>1/2</td>
<td>*mV-</td>
<td>mu-</td>
</tr>
<tr>
<td>2</td>
<td>*cV-</td>
<td>ngi- (NP), ci-</td>
</tr>
<tr>
<td>3</td>
<td>*ka- (NP), Ø</td>
<td>a- (NP), yi-, ci-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>*nyV-rrV-</td>
<td>ngi-</td>
</tr>
<tr>
<td>1/2</td>
<td>*ngV-rrV-</td>
<td>nga-</td>
</tr>
<tr>
<td>2</td>
<td>*nV-rrV-, *ku-rrV-</td>
<td>ngi-</td>
</tr>
<tr>
<td>3</td>
<td>*pV-rrV-</td>
<td>wu- (NP), pi-</td>
</tr>
</tbody>
</table>

\(^8\) The pan-non-Pama-Nyungan non-singular marker *rri- bears striking resemblance to the Traditional Tiwi past tense marker rri-, which occurs in the same position. As such they are probably historically related. The rri- marker is discussed further in §5.2.1, along with the other tense markers.
This is unsurprising given that Tiwi was one of the languages included in Harvey’s (2003:504-12) study, but it still underscores the fact that Traditional Tiwi significantly resembles the general non-Pama-Nyungan pattern and is therefore unequivocally Australian.

Other linguistic evidence may suggest a closer connection between Tiwi and geographically close mainland languages (see map 2 on page xii). Many of the features that Tiwi shares with other Australian languages can be interpreted as evidence of borrowing, especially in light of the fact that the languages with which Tiwi shares these features tend to be geographically close, whereas if they were inherited features from proto-non-Pama-Nyungan or proto-Australian they would more likely be dispersed among Australian languages.

The velar fricative (see §4.1.1) is an unusual phonemic segment for Australian languages, but it is shared with the Iwaidjan languages spoken on the Cobourg Peninsula (Capell & Hinch, 1970; Pym & Larrimore, 1979; Evans, 2000; Singer, 2006; Teo, 2007), although Tiwi does not similarly share some of the other phonemic features that are common to the Iwaidjan languages, such as the enlarged set of laterals (Evans, 2000:100). The minimal/augmented pronominal number system is a feature that Tiwi shares with some of the languages of the Darwin area, some of the Daly languages, and many of the Gunwinyguan languages (Dixon, 2002:245), but not the Iwaidjan languages, which all have a singular/(dual)/plural system. The reconstructed pronominal system given in Table 1 indicates, furthermore, that the minimal/augmented system was inherited, while singular/plural systems, such as exhibited by Iwaidjan languages, are innovated. Lastly, Tiwi polysynthetic verb morphology and the incorporation of nominals and verbs (see chapter 7), may indicate a closer relationship with Gunwinyguan languages like Bininj Gun Wok (Evans, 2003), Rembarrnga (Saulwick, 2003; McKay, 1975), Anindhitiya (van Egmond, 2012) and Wubuy (B Baker, Horrack, Nordlinger, & Sadler, 2010), all of which similarly exhibit incorporation.

There are also features of Traditional Tiwi that are unusual within the Australian context. One of these is that tense is represented morphologically on the inflecting verb as a prefix to the stem rather than a suffix immediately after the stem, the latter of which is the broadly observed pattern for Australian languages and is a central premise in Dixon’s (1980:382-85; 2002:215-24) hypothesis for the emergence of verb conjugation classes among Australian languages.
2.2.3 Current situation

Today all Tiwi people speak Modern Tiwi (Lee, 1987:9). The differences between Traditional and Modern Tiwi are extensive, and can be found at every level of the grammar, from the sound system to the morphology and syntax. In fact, so extensive are the changes to the language that a speaker of Modern Tiwi would not understand someone speaking Traditional Tiwi beyond a few words.

The changes in the Tiwi language were already observable as early as 1960, when Pilling (1960) noticed differences between the language used by older people and that used by younger people. Osborne (1974:3-4) also notes that the language was undergoing some changes, and predicted that within two or three generations, it would “cease to function as a living language” (1974:4).

The most notable change to the Tiwi language affects the verb morphology. Several entire morphological positions in the Traditional Tiwi inflecting verb have been lost, and others have been reduced as to the members they can take (Lee, 1987:154-55). Modern Tiwi does not mark objects on verbs, and subject marking is only obligatory in more formal registers. According to Lee (1987:148), the normal type of verbal construction in Modern Tiwi is based on complex predicate constructions in Traditional Tiwi (see §4.3.4), wherein a coverb combines with one of a limited class of inflecting verbs. While in Traditional Tiwi the class of coverbs appears to be closed, in Modern Tiwi it is an open class into which verbs derived from English are borrowed. Whether it forms a complex predicate or not, the inflecting verb in Modern Tiwi, such as mi ‘do’ below, exhibits much less morphological complexity than in Traditional Tiwi.

(9) Modern Tiwi:

weypim pi- rri- mi ngawa
wave 3PL- PST- do 1PL
‘they waved to us’ (Lee, 1987:276)

Often, the verb takes no inflections at all and surfaces as a bare stem, such as pakuparaji ‘fall’ or awurlimayi ‘walk’ below.
In Modern Tiwi, the verb can no longer be marked for many of the categories that were optional in Traditional Tiwi, such as distance/direction, associated motion or temporals, nor can inflecting verbs take incorporated nominals or verbs as they can in Traditional Tiwi (see chapter 7).

Modern Tiwi is spoken on the Tiwi Islands in every social interaction between Tiwi people of any age, and children grow up speaking it as their first language. As such, Modern Tiwi is one of the healthiest Indigenous languages in Australia.

The next chapter will outline the research that was undertaken as part of this project. It will furthermore describe the corpus of recordings, comprising Osborne’s recordings in addition to my own, and the body of relevant literature on which my analysis as presented in this thesis is based.

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9 Tiwi people are generally bilingual with a fairly standard form of Australian English. As such, if a social interaction involves any non-Tiwi interlocutor, the choice of language will be English.
CHAPTER 3

Methodology

This chapter outlines the methodology with which I conducted research on Traditional Tiwi. In addition to using both Osborne (1974) and Lee (1987) as vital sources of linguistic analysis, I conducted fieldwork to collect new data, and obtained Osborne’s original field recordings. I then transcribed these using the structural knowledge I had developed during my own fieldwork so that recordings from an earlier period could be included in my analysis. This recorded data supplements the published data provided in Osborne (1974) and Lee (1987).

The two datasets together form a substantial corpus: 37 hours in total of recordings of the Traditional Tiwi language. The consistency between the linguistic forms in Osborne’s recordings and my own, even though the two datasets are separated by almost half a century, is an indication of the robustness of the data.

All efforts have been made to ensure that data is collected sensitively and with continual attention to best-practice methods such that recordings are as useful as possible, not only for
this project, but also for potential future researchers who may find the data relevant to their research.

3.1 Fieldwork

My first trip to the Tiwi Islands was a preliminary trip in August 2010 for the purposes of meeting members of the community, gathering support from them and gauging the feasibility of conducting linguistic fieldwork. I spent this time meeting with various members of the community including elders, and discussing the project to make sure that the Tiwi people understood the research that I was intending to undertake. I also tried to identify potential participants that would assist me as language teachers. While I did not manage to recruit specific participants, several people indicated that there were certainly people in the islands who could speak Traditional Tiwi, and would be willing to assist me in learning it.

In March 2012, I returned to the field to undertake a three-month data collection trip in Wurrumiyanga. During this time I worked intensively with an elderly woman, Anita Pangiramini, who lived for most of her life in Pirlangimpi, Melville Island, but in her later years moved to the aged-care facility in Wurrumiyanga.

My recordings with Anita consist mainly of unstructured interviews and elicitation sessions over a variety of semantic domains, but concentrating on declarative statements. Osborne’s recordings also concentrated heavily on this particular area, and I aimed at first to emulate what he had collected before delving deeper into the lesser known areas of the grammar.

I also met with Justin Puruntatameri, an elderly man who was regarded by all Tiwi people as being the oldest and most knowledgable person on the islands with respect to language, culture and ceremony. I met with Justin in Pirlangimpi, Melville Island, towards the end of my field trip and we discussed my work with Anita. He judged that the forms that I had collected in recordings with Anita were indeed representative of Traditional Tiwi. He was even surprised that she managed to remember the older forms of words and complex verbs, as in his opinion, no one had used them in decades. I also collected a brief wordlist from him, though we were unable to make any recordings.
Before I was able to return for a second field trip, Anita and Justin died within a couple of months of each other. As they were the only two people that I had identified who could speak Traditional Tiwi with any fluency, conducting more fieldwork was unlikely to result in the collection of useful data, and plans for further trips were abandoned. Consequently, my recordings of Traditional Tiwi are only of a single speaker, Anita. This is not problematic to the validity of the data however, as Justin had verified that the recordings that I collected with Anita were in fact representative of traditional forms of Tiwi. Moreover, as I later discovered while transcribing Osborne’s materials, the forms that I had elicited from Anita are highly consistent with those collected by Osborne from several speakers nearly half a century earlier, when Traditional Tiwi was more commonly spoken. Compare (12) below, recorded by Osborne in 1967, with (13) recorded by me in 2012. While they contain different morphemes, the structure of the verb is almost identical:

(12)  
\[ yuwatumungirlipangkupiyankinya \]
\[ yi- watu- mi- ungirlipangi- kupi- ankinya \]
\[ 3MIN.S.M.PST- MORN- 1MINOBL- sleep- tobacco- steal \]
\[ ‘he stole tobacco from me in the morning while I was sleeping’ \]
\[ (CO_699A: 00:53:37) \]

(13)  
\[ yuwatumingirlipangipirni \]
\[ yi- watu- mini- ungirlipangi- pirni \]
\[ 3MIN.S.M.PST- MORN- 1MINO- sleep- hit \]
\[ ‘he hit me in the morning while I was sleeping’ \]
\[ (AW_20120413_03: 00:37:43) \]

As such I can say with some confidence that in this project I managed to significantly expand the corpus of Traditional Tiwi recordings and furthermore, I have enriched the existing corpus by transcribing Osborne’s original recordings.

### 3.2 Corpus

The corpus of Traditional Tiwi primary data consists of approximately 37 hours of recorded audio; 10 hours collected in 1966 and 1967 by Charles Osborne, and 27 hours that I collected during my field trip in the early months of 2012. The corpus contains some texts and some wordlists, but is heavily focused on elicited sentences and informal unstructured interviews.
In addition to recorded materials, much of my own understanding of the structure of the language is based on conversations with my main Tiwi teacher, Anita Pangiramini, as well as Osborne’s description of Traditional Tiwi (Osborne, 1974), Lee’s description of Modern Tiwi and her comprehensive dictionary (Lee, 1987, 1993). I furthermore draw upon several smaller studies that deal with Traditional Tiwi to some extent (Capell, 1967; Smith, 2008; Anderson & Maddieson, 1994; Ray, 1988; Breen, 1979; Lee, 1988).

There may be further recorded materials in existence, but I was unable to access any recordings beyond Osborne’s collection. There is always the possibility that further, previously unknown recordings, will emerge that might be useful to answering some of the remaining questions. Jennifer Lee for example, acknowledges Marie Godfrey’s recordings as the source of the majority of her Traditional Tiwi description (1987:8). Unfortunately, Lee was unable to locate her copy of these recordings when I met her during my 2010 field trip, and I have been unable to find any further information about them.

3.2.1 Osborne materials

Charles Osborne visited the Tiwi Islands twice between 1966 and 1967 and recorded several hours of interviews, wordlists and texts with speakers of Tiwi each trip. They were recorded on reel-to-reel tapes and were housed at AIAS\textsuperscript{10} (later AIATSIS), where they were more recently digitised. I obtained them, approximately 10 hours in total, as digital files from AIATSIS\textsuperscript{11} in 2010 and, after gaining a requisite amount of structural knowledge from my fieldwork, transcribed them myself.

The recordings consist mainly of elicitation sessions, wordlists and texts as spoken by Tiwi people. The elicitation sessions mostly contain paradigms designed by Osborne, looking specifically at verb morphology including incorporation of nominals and verbs, temporals, and several different tense/aspect/mood combinations. The recordings also contain wordlists spoken by Tiwi people and some verbal paradigms spoken not by Tiwi people, but by Osborne himself. I concentrated mainly on the recordings that contain verb paradigms elicited by Osborne but spoken naturally by his participants, as these were the most useful for the

\textsuperscript{10} Australian Institute for Aboriginal Studies.

\textsuperscript{11} AIAS was renamed AIATSIS (Australian Institute for Aboriginal and Torres Strait Islander Studies) in 1989.
present study. Given their age, the recordings are in remarkably good condition, and transcribing them was unproblematic.

It is likely that in order to save on weight, Osborne only used recording space after he had had discussions with his interviewees. This is also evident by the fact that the ten hours of recordings do not contain everything that he describes in his grammar (Osborne, 1974). Moreover, the recordings clearly follow a predetermined script of paradigmatic forms, as indicated by several occasions when the interviewee provides a different form than the one Osborne was expecting. Osborne clearly used the limited recording capacity to preserve the pronunciation of various forms. This also explains why he records himself reading out some verbal paradigms.

That said, I remain certain that the responses given to Osborne’s elicitations are genuine, natural sentences and are grammatical, if not entirely naturalistic, examples of the language. The fact that the recordings I collected with Anita Pangiramini are consistent with Osborne’s also confirms this.

I have preserved Osborne’s own file-naming convention as all references to his corpus, in the form of audition sheets and the access numbers in AIATSIS’s catalogue utilise the same system. Osborne also records the archive number in a narrative in the first few seconds of each tape. They take the form of a three-digit number and either A or B, denoting which side of the original reel-to-reel tape the recording is on. My references to his recordings throughout this thesis are presented in the same manner, preceded by his initials and followed by a time code to the nearest second, as follows:

    CO_707B: 00:39:02

Other example sentences may derive from either Lee (1987), Osborne (1974) or other sources, in which case I cite that source with page numbers instead of recording numbers.

My transcriptions of Osborne’s recordings will be archived with AIATSIS alongside the original recordings.
3.2.2 Wilson materials

My own contribution to the corpus of Traditional Tiwi consists of 27 hours of high-quality digital audio, collected between March and May 2012 in Wurrumiyanga. Apart from several earlier recordings with people that I determined later to be partial speakers of the language, only one fluent speaker of Traditional Tiwi is represented in these recordings.

Throughout my field trip, I employed best-practise language documentation techniques to ensure the best possible quality recordings for my own purposes, and potentially for future uses of the data by others. The recordings were made using a Zoom H4n solid-state recorder and a Rode NT4 stereo condenser microphone, held in a microphone stand with shock-mount, rather than the Zoom’s internal microphones. This setup virtually eliminates the possibility of artefact noises from the internal mechanism of the recorder. Positioning of the recorder with respect to the participant was also a concern, as it is generally the most easily controlled variable with the most significant effects. Most recordings were made outdoors at the aged-care facility in Wurrumiyanga in relatively noisy conditions. Using a windsock, and positioning the microphone quite close to the participant reduced ambient noise. Some of the recordings were made indoors, and the sound quality of these recordings is significantly better than those recorded outside.

Recordings were made using uncompressed .wav format in two channels (stereo), with a 96 kHz sample rate and 24-bit resolution. This recording format significantly exceeds the minimum quality for language documentation and due to its high quality, can be used for a wider range of applications, including phonetic analysis. It also exceeds the minimum audio quality required for archive at any institution.

All recording sessions began with a short narrative containing spoken metadata such as the date and time, the location, the participant, and the name of the language. The reason for this is to preserve the details of a session into the recording itself, in case files become dislocated from their filenames or their associated metadata. Notes were also taken during each recording session, which were used while transcribing recordings, but which will also be scanned and archived along with them. Metadata for the entire collection was curated in situ, and kept in a text-based spreadsheet in multiple locations.
As these recordings are potentially the last record of Traditional Tiwi, every effort was made to minimise any possibility of data loss. Backup copies of all recordings were made daily while in the field for security, and multiple backups were made on my return to Melbourne. In accordance with best-practise techniques, no edits to any recordings were made since the original recordings. This is to eliminate the risk of multiple versions, especially as annotations and the examples throughout this thesis are located within recordings on the basis of precise time codes, and any editing carries the risk of dislocating annotations from the corresponding segment of the recording. In essence, the original recordings made in the field are canonical; all copies of the data are exact digital clones, and the time codes given throughout this thesis can therefore be used to quickly find the example sentence in the recordings. The recordings will be archived with AIATSIS along with annotations and transcriptions, fieldnotes and associated metadata.

I use reference codes throughout this thesis to identify where and in which recording an example sentence can be located. The codes for my recordings consist of my initials followed by an 8-digit date (ISO format) and recording number, followed a time code to the nearest second:

   AW_20120413_03: 00:24:37

This reference says that the example in question can be found 23 minutes and 37 seconds into the third recording of April 13, 2012.

The next chapter provides an overview of the grammar of Traditional Tiwi as presented in Osborne (1974) and Lee (1987) and will identify the remaining gaps in the knowledge of Tiwi. It is beyond the scope of this study, however, to address all of these gaps, and so in the subsequent chapters, I focus particularly on the verbal morphology (chapter 6) and incorporation phenomena (chapter 7).
CHAPTER 4

A Summary of previous linguistic descriptions

This chapter provides an overview of Traditional Tiwi grammar as described by the two previous descriptive works; Osborne (1974) and Lee (1987).

Osborne’s grammar (1974) is a good description of the basic structure of Tiwi and was extremely useful as an aid in analysing my data and forming my basic understanding of Tiwi grammatical structure. However, it is not comprehensive in many areas. Verb morphology in particular is an area in which Osborne’s description is limited.

Lee (1987) is a much more comprehensive work than Osborne’s, however as her interest was in the diachronic changes that led to the emergence of Modern Tiwi, improving on Osborne’s description of Traditional Tiwi specifically was not within the scope of her project. As such, Lee (1987) mainly follows Osborne (1974), differing mostly with respect to orthography and terminology.
The purpose of this chapter is twofold: on one hand, it provides the interested reader with a summary of the current description of Traditional Tiwi, and on the other, it demonstrates the lack of adequate description of particular phenomena, particularly in the area of verb morphology, and therefore motivates the need for a revision of the description.

This chapter will describe Traditional Tiwi phonetics and phonology, it will then describe each of the major word classes in Traditional Tiwi, nominals and pronouns, verbs and coverbs, and then describe what is known of Tiwi syntax, including several syntactic constructions such as interrogatives, imperatives and complex predicates.

4.1 Phonology

The sound system of Traditional Tiwi is typical for an Australian language. There are five phonemic places of articulation with a nasal and an oral stop at each place. A single laminal series of stops has two series of non-contrastive realisations; lamino-dental and lamino-palatal, conditioned by the following vowel. Voicing is not contrastive and while there is no class of fricatives, there is a single velar fricative segment. There are also rhotics and laterals at both apico-alveolar and apico-postalveolar (retroflex) positions, and semi-vowels at both labio-velar and palatal positions.

Apart from the velar fricative, the sound system of Traditional Tiwi very closely mirrors the sound system that Dixon (2002:549) identifies as canonical for Australian languages.

<table>
<thead>
<tr>
<th>Consonants</th>
<th>Peripheral</th>
<th>Dorso-Velar</th>
<th>Laminal</th>
<th>Apico-Alveolar</th>
<th>Apico-Postalveolar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>p [p]</td>
<td>k [k]</td>
<td>j [j]</td>
<td>t [t]</td>
<td>rt [ɾt]</td>
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<tr>
<td>Nasal</td>
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<td>ny [ŋ]</td>
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</tr>
<tr>
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<td></td>
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<tr>
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<td>i [i]</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12 Phonetic symbols are provided in square brackets beside their orthographic representation.
### 4.1.1 Consonants

As shown in Table 2, most of the consonantal inventory of Tiwi is typical for an Australian language. The only significant difference between the canonical Australian consonantal inventory (Dixon, 2002:549) and that of Tiwi is the existence of the velar fricative.

The laminal stop and nasal each have two allophones: lamino-dental and lamino-palatal. Osborne (1974:12) analyses the dental series as the basic phoneme with the palatal variants occurring before the high-front vowel. Others (Anderson & Maddieson, 1994; Lee, 1987; Maddieson, 1984) agree with this assessment, although the graphemes *j* and *ny* are used in the orthography, in line with the orthography used in the current dictionary (Lee, 1993).

As Osborne (1974:20) notes, medial stops in some words can occur prenasalised, and individual speakers will prenasalise medial stops to differing degrees. Osborne refers to this as ‘optional syllable closure’. Prenasalisation is limited to certain words however, as others, such as (14b), do not allow it. Moreover, some words that contain prenasalised stops cannot be denasalised, as in (14c) below.

(14a) *pupuni*  *pumpuni* ‘good’
(14b) *kukuni*  *kungkuni* ‘water’
(14c) *mapunga*  *mampunga* ‘canoe’

There appears to be no systematic principle that would explain why some words allow both simple stops and homorganic nasal-stop clusters, such as pu(*m*)puni ‘good’. Throughout this thesis, examples are transcribed as they sound, and so some words may vary in terms of prenasalisation.

The velar fricative is the outlier in the Tiwi consonant inventory. It is not in a natural class with any other segments, is relatively infrequent compared with other segments and is restricted to intervocalic position (Osborne, 1974:10). All of the Iwaidjan languages possess a similar segment (Capell, 1962:129; Pym & Larrimore, 1979:3; Teo, 2007:5) which Capell (1962) argues is phonemic for both Iwaidja and Mawng. Evans (1998:117) notes that it is an areal feature of the languages of the Western Arafura coast, including Tiwi and Kunbarlang, a Gunwinyguan language spoken in western Arnhem land. Osborne speculates that in Tiwi,
the fricative may have developed either from contact, presumably with Iwaidja, or by fortition of /w/ (1974:10-11), and so does not take it to be an inherited feature.

Lee agrees with Osborne in the phonemic status of the velar fricative, and describes it as “only lightly articulated although it is voiced” (1987:25). She goes on to say that it is difficult to distinguish it from w. I agree, and have frequently missed its occurrence in my recordings except for in carefully enunciated words.

In Modern Tiwi, this segment is generally deleted, which leaves a sequence of vowels. As a result of this vowel sequence, a glide may be inserted or the vowel will be lengthened (Lee, 1987:36), as shown in (15).

<table>
<thead>
<tr>
<th></th>
<th>anjirugha ‘midday’</th>
<th>murligha ‘angry’</th>
<th>kularlagha ‘hunt’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15a)</td>
<td>[anciguwa]</td>
<td>[mulija]</td>
<td>[kula[a:]]</td>
</tr>
</tbody>
</table>

### 4.1.2 Vowels

Tiwi exhibits a three-vowel system comprising two high vowels, i and u, and a low vowel a. Tiwi therefore exemplifies the canonical Australian vocalic inventory (Dixon, 2002:552). The vowels are shown in Table 3.

<table>
<thead>
<tr>
<th></th>
<th>front</th>
<th>back</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>i</td>
<td>u</td>
</tr>
<tr>
<td>low</td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

The two high vowels correspond closely to the semi-vowels y and w, and in the phonemic chart provided in Table 2, they are categorised in the same way as consonants in terms of place of articulation on the basis of phonetic similarity, as evidenced by phenomena such as glide insertion and anticipatory vowel assimilation (Dixon, 2002:550). The high-front vowel i is associated with the laminal semi-vowel y and the other laminal segments, and the high-back vowel u with the peripheral semi-vowel w and the other peripheral segments.

Unlike the high vowels, the low vowel a has no specification for tongue position, and so it is not associated with any of the consonantal places of articulation.
Osborne (1974:11) argues that in addition to the three vowels listed above, Traditional Tiwi has a fourth vowel: a low-back rounded vowel o. However his evidence for it is unconvincing and many remaining problems with it lead Breen (1979) to argue that o is in fact a variant of a, and that Tiwi could therefore be classed with the canonical Australian triangular vowel system.

The orthographic o however, is still used in the standard orthography and in the dictionary (Lee, 1993). Often though, lexical entries containing o will also list an alternate form that contains a in its place, suggesting further that it is a variant of a:

\[(16)\]  
\textbf{rokuma} \[\textit{see: rakuma}\] \hspace{1cm} (Lee, 1993:128)

\[(17)\]  
\textbf{tokayini} \[\textit{also: twakayini, takawayini}\] \hspace{1cm} (Lee, 1993:135)

In light of this I follow Breen (1979) and take Traditional Tiwi to have a standard Australian three-vowel system.

Traditional Tiwi exhibits anticipatory vowel assimilation, such that high-front vowels become high-back vowels due to environmental effects such as a following w. Thus the bound pronoun \textit{ngi-} becomes \textit{ngu-} in example (19) due to assimilation with the semi-vowel \textit{w} that immediately follows it.

\[(18)\]  
\textit{ngiya waya ngirrimangapa} \hspace{1cm} (AW_20120413_03: 00:12:36)  
\textit{ngiya waya \hspace{0.2cm} ngi-\hspace{0.2cm} rri\hspace{0.2cm} -\hspace{0.2cm} mangapa} \hspace{1cm} 1MIN already 1MIN- PST- drink \hspace{1cm} ‘I already drank’

\[(19)\]  
\textit{nguwunjingapa} \hspace{1cm} (AW_20120413_03: 00:02:24)  
\textit{ngi-\hspace{0.2cm} wunjingu\hspace{0.2cm}-\hspace{0.2cm} apa} \hspace{1cm} 1MIN.NPST- DUR- eat \hspace{1cm} ‘I’m eating’

It is difficult to perceive the difference between \textit{i} and \textit{u} ordinarily, as more often than not they are both centralised and occur as \textit{[ɨ]}. In transcribing the data and representing it in this thesis, I have erred on the side of phonetic realisation, thus many of the bound pronouns are variously transcribed with either orthographic symbol \textit{i} or \textit{a} depending on how they sound in that particular example.
4.2 Word classes

The main lexical Traditional Tiwi word classes are nominals, pronouns, verbs and coverbs, each of which is described in the following sections. In addition, there are several smaller word classes including particles and interjections that will not be described here. For detailed information on these, see Lee (1987:123-46).

4.2.1 Nominals

As with many Australian languages (Dixon, 2002:67-68), nouns, words which prototypically refer to objects in the world, and adjectives, words that modify nouns, cannot be formally differentiated in Traditional Tiwi in terms of their distribution or morphological behaviour. In fact even the semantic range of nouns and adjectives is not clearly distinct. All nominals in Traditional Tiwi can function as arguments of the verb, and trigger agreement with verbal morphology either as agents, as in (20), or as patients as in (21).

(20) nginayi kirijini awunjirakilinga
     nginayi   kirijini   a- wunjingu- akilinga
     DIST.M   small.M  3MIN.M.NPST - DUR - climb
     ‘that child is climbing (the tree)’

(21) ngumpumwarri awunyirra tinga awungarra
     ngi- mpi- ø- umwarri   awunyirra  tinga  awungarra
     1MIN- NPST(O:F)- 3MINO- leave  PROX.F  person.F  here
     ‘I’ll leave this woman here’

Nouns and adjectives also share morphological distinctions. They are marked for gender and number in a three-way split: masculine singular, feminine singular, and plural which is gender-neutral. For these reasons, nouns and adjectives are classed together in Traditional Tiwi as a single word class called nominals.

Gender of nominals is determined by biological sex in the case of humans or higher animates, and some nominals relating to myths derive their gender from the characters in the myths. Other nominals are assigned gender on the basis of physical properties, particularly size and shape (Osborne, 1974:51).

Small, thin or straight objects are generally classified as masculine, while large, ample and rotund objects are classified as feminine. Moreover, nominals denoting certain objects can be
marked with either one class or another as a means of flouting the semantic interpretation of
the genders. One nominal can therefore take masculine to denote one entity, and feminine to
 denote another. As an example, Osborne (1974:51) mentions *wupunga* ‘grass’ which is usually
feminine, but whose masculine counterpart *wupuni* refers to a single blade of grass, being long
and thin. Other examples are reproduced in Table 4.

Table 4: Gender of certain objects (Osborne, 1974:51)

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>waliwalini</em></td>
<td><em>waliwalinga</em></td>
</tr>
<tr>
<td>small ant</td>
<td>large ant</td>
</tr>
<tr>
<td><em>miyarti</em></td>
<td><em>miyartinga</em></td>
</tr>
<tr>
<td>small pandanus</td>
<td>large pandanus</td>
</tr>
<tr>
<td><em>mungkwani</em></td>
<td><em>mungkwanga</em></td>
</tr>
<tr>
<td>small stone axe</td>
<td>large stone axe</td>
</tr>
<tr>
<td><em>manjani</em></td>
<td><em>manjanga</em></td>
</tr>
<tr>
<td>small stick</td>
<td>large sticks</td>
</tr>
</tbody>
</table>

For some nominals, gender is determined by mythology. *Japarra* ‘moon’, for example, is
masculine because *Japarra* is a male protagonist in an important Tiwi creation story (See
Osborne, 1974:81-84 for a rendition of the story).

Generally speaking, the ending of a nominal indicates its gender and number. Masculine
singular nominals take either ending -*ni* or -*ti*, feminine singular either -*nga* or -*ka*, and plural
either -*wi* or -*pi*. These suffixes loosely group together in terms of lexical frequency, with the
forms -*ni*, -*nga* and -*wi* being the more frequent and the forms -*ti*, -*ka* and -*pi* being less
frequent, as shown below in Table 5.

Table 5: Relative proportions of gender suffixes (Lee, 1987:81; Osborne, 1974:52)\(^\text{13}\)

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>-<em>ni</em></td>
<td>-<em>nga</em></td>
<td>-<em>wi</em></td>
</tr>
<tr>
<td>54%</td>
<td>54%</td>
<td>82.5%</td>
</tr>
<tr>
<td>-<em>ti</em></td>
<td>-<em>ka</em></td>
<td>-<em>pi</em></td>
</tr>
<tr>
<td>17%</td>
<td>24.5%</td>
<td>17.5%</td>
</tr>
<tr>
<td>-<em>∅</em></td>
<td>-<em>∅</em></td>
<td></td>
</tr>
<tr>
<td>29%</td>
<td>21.5%</td>
<td></td>
</tr>
</tbody>
</table>

There are also nominals that have inherent gender and are thus not overtly marked with
either suffix or, as in (23), look as though they are one gender when they are in fact the other.
Grammatical gender is always recoverable however, through agreement with other nominals,
demonstratives, or the verb.

\(^{13}\) The relative proportion of the masculine and feminine endings is based on a sample of 200 tokens of each gender,
and is taken from Osborne (1974:52). The proportions of the plural endings comes from Lee (1987:81) although she
does not give the number of tokens.
Osborne (1974) argues that the two forms of each of the gender suffixes are allomorphs of underlying suffixes. Masculine singular, he claims, is underlyingly Ni- (where N indicates an underspecified consonant rather than an underspecified nasal) with morphologically conditioned variants -ni and -ti, and feminine singular is -Ka (where K similarly indicates an underspecified consonant with a different distribution from N), with morphologically conditioned variants -nga and -ka. However, he also notes, “no explanation can be offered for the selection of suffixes by any particular stem” (1974:52).

I agree with Osborne that the gender suffixes are phonologically related to one another, although I argue that the underlying forms were historically -ni, -nga and -ni with variants -ti, -ka and -pi respectively. The change is possibly due to the suffix occurring adjacent to a stop, such as in jirti in Table 6.

Due to some forms, shown below, that do not consistently denasalise the nominal suffixes, this process cannot be productive. Each ending must instead be learned for each nominal. Table 6 illustrates some nominals whose suffixes are inconsistent, for instance where the masculine form takes the nasal suffix -ni while the feminine takes the non-nasal -ka.

Table 6 also illustrates two plural nominals, mamurruntawi ‘white.pl’ and jajiruwi ‘sick.pl’, whose forms contain a circumfix; a partial reduplication of the initial syllable Ca- and the
The circumfix form of the plural marker is exceedingly rare and is only preserved on high-frequency nominals such as kakirijiwi ‘children’ (literally ‘small.pl’). Most often, the reduplicated first syllable is optional. Mamanta ‘friends’ (compared with mantani and mantanga for male and female friend respectively) is the only known example of a nominal that takes the reduplicated initial syllable but does not take a plural suffix -wi or -pi.\textsuperscript{15}

Many nominals in Traditional Tiwi can be marked with a suffix -ari that derives adjectival forms that can be used to modify other nominals.

\begin{itemize}
\item[(24)] yikwanari arimi
\begin{itemize}
\item yikwan -ari  a- ri- mi
\item fire -ASS  3MIN- ?- do
\item ‘it’s hot’ (lit. ‘it’s like fire’)\textsuperscript{(AW_20120413_01: 00:27:27)}
\end{itemize}
\item[(25)] tokwampinari
daybreak
\begin{itemize}
\item (lit. ‘of the bird’)\textsuperscript{(Ward, 1990:76)}
\end{itemize}
\item[(26)] japinari
morning\textsuperscript{(Ward, 1990:76)}
\item[(27)] awurlanari
afternoon\textsuperscript{(Lee, 1993:18)}
\end{itemize}

For many of these forms, the underlying nominal is transparent, such as tokwampini ‘bird’ in (25), but for (26) the only possible candidate for an underlying nominal is japini ‘yesterday’.

In the context of Australian languages, this relationship between forms would not be unexpected. In Kuuk Thaayorre, for example, ‘morning’ and ‘yesterday’ are also related to each other in form, with the former being derived by reduplication of the latter (Gaby, 2006:67). Nominals marked with -ari can denote semblative or associative forms as in (24), they can be used to denote times of day as in (25) through to (27), or seasons and times of the year, as illustrated in Table 7.

\textsuperscript{14} Muruntani and its variants are now also used to refer to Europeans, however it is uncertain whether mamuruntawi ‘white.pl’ was a high frequency lexeme prior to settlement. That it takes the circumfix form of the plural marker may suggest that this morphological form was still productive post-settlement.

\textsuperscript{15} In Modern Tiwi, Mamanta is only used by older people. Most people instead use the regularly formed mantawi. Osborne (1974:53) lists both forms separately, suggesting that the two were already in variation in the late 1960s.
Table 7: Tiwi seasons (Ward, 1990:41-45)

<table>
<thead>
<tr>
<th>Season name</th>
<th>Source nominal</th>
<th>Season name</th>
<th>Source nominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>jamutakari</td>
<td>jamuta</td>
<td>kumurrupunari</td>
<td>kumurrupuni</td>
</tr>
<tr>
<td>wet season</td>
<td>rain</td>
<td>dry season</td>
<td>smoke</td>
</tr>
<tr>
<td>tiyari</td>
<td>tiyatiya</td>
<td>build-up</td>
<td>cicada</td>
</tr>
</tbody>
</table>

The seasons in particular suggest that the -ari suffix is an associative marker. I analyse it as deriving a nominal that can be used in combination with other nominals and which functions as a modifier.

4.2.2 Pronouns

Osborne (1974:59) describes all personal pronouns and demonstratives as a single word class on the basis of semantic evidence. He subdivides pronouns into four groups: personal pronouns, demonstrative pronouns, interrogative pronouns and negative pronouns, although elsewhere (1974:54-57), he describes five more classes of pronouns, including emphatic, possessive, collective, reflexive, and impersonal. The basis for the differentiation of these nine pronominal categories is entirely semantic; emphatic pronouns for example, are described as being “somewhat similar in function to the English emphatic forms ‘myself’, ‘yourself’, etc.” (1974:58).

Lee (1987:100-22) improves on Osborne’s description by grouping pronouns together on the basis of morphological behaviour. She identifies the following classes: personal pronouns (normal, emphatic, possessive, alternate, reflexive and reciprocal), on the basis that they are all built on the same pronominal stems; impersonal pronouns (interrogative, indefinite and negative) again on the basis that they are built on the same stem; and demonstratives. These are briefly discussed in the following sections. Lee also identifies a relative pronoun, however it is not discussed here as it is only rare in my corpus. For further detail see Lee (1987:100-22).

4.2.2.1 Personal pronouns

Personal pronouns encode person and number and, for 3rd person minimal pronouns, gender, of their referent. Number is encoded using a minimal/augmented system rather than a singular/plural system (Osborne, 1974:54; Lee, 1987:100), along with many languages of the
northern coastline (Dixon, 1980:245). The free pronouns are direct paradigmatic mirrors of
the bound pronouns, both subject and object (see §5.1.1 and §5.1.2), in that they all exhibit
the same person and number contrasts, except for a single syncretic form among the emphatic
series of the free pronouns, in which the contrast between 1AUG and 1/2AUG is neutralised.
The basic and emphatic forms of the free pronouns are given in Table 8.

Table 8: Basic and emphatic personal pronouns (Lee, 1987:101)

<table>
<thead>
<tr>
<th>person</th>
<th>basic MIN</th>
<th>basic AUG</th>
<th>emphatic MIN</th>
<th>emphatic AUG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ngiya</td>
<td>ngagha</td>
<td>ngilawa</td>
<td>ngawila</td>
</tr>
<tr>
<td>1/2</td>
<td>muwa</td>
<td>ngawa</td>
<td>muwila</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>nginja</td>
<td>nuwa</td>
<td>nginjila</td>
<td>muwila</td>
</tr>
<tr>
<td>3 M</td>
<td>ngarra</td>
<td>wuta</td>
<td>ngatawa</td>
<td></td>
</tr>
<tr>
<td>3 F</td>
<td>nyirra</td>
<td>wuta</td>
<td>nyitawa</td>
<td>wutawa</td>
</tr>
</tbody>
</table>

The emphatic forms look as though they are built on the basic forms with the addition of a
suffix that can be either -ila (which occurs after apical consonants) or -awa (which occurs
elsewhere). The emphatic forms ngilawa ‘1MIN’, ngatawa ‘3MIN.M’ and nyitawa ‘3MIN.F’ are
problematic for this analysis in that they differ from the basic forms on which they are built.
I argue that the basic form of the 1MIN, 3MIN.M and 3MIN.F pronouns were, at an earlier
stage, ngila, ngata and nyita respectively, but underwent lenition such that l became y and t
became rr, while the emphatic forms did not undergo the same change and thus diverged.
The change from t to rr is demonstrated elsewhere in Tiwi. The prohibitive particle for
example (see §4.3.3), is given by both Osborne (1974:69) and Lee (1987:196) as ngajiti,
whereas in my data it always occurs as ngajirri.

Lee (1987:101) does not find a distinction between 1AUG and 1/2AUG free pronouns whereas
Osborne (1974:54) does. Lee lists them both as ngawa, and she speculates that the difference
in analysis could be due to the location of her fieldwork as opposed to Osborne’s, and is thus
indicative of a dialectal difference, or alternatively, that it could be the beginning of a shift to
a singular/plural system. The contrast between these two persons, however, is maintained in
subject marking on verbs (see §5.1.1).

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16 J.C. Smith (2008) in fact argues that the loss of the 1/2AUG pronoun in Modern Tiwi prompted the
refunctionalisation of the entire system from minimal/augmented to singular/plural.
I follow Osborne and retain ngagha ‘1AUG’ in the paradigm as his recordings clearly demonstrate a contrast between these pronouns.

(28a) ngawa waya ngarruri
ngawa waya nga- rri- uri
1/2AUG NFUT 1/2AUG- PST- go
‘we (incl) went’ (CO_707A: 00:22:48)

(28b) aya, ngagha waya ngunkturi
aya ngagha waya ngi- nti- uri
hey 1AUG NFUT 1AUG- PST- go
‘hey, we (excl) went’ (CO_707A: 00:23:15)

Further derived pronouns, such as the possessive pronouns, contrastive topic, reflexive and cooperative pronouns generally take the emphatic series of pronouns as their stem. Some, however, take the basic form.

The possessive pronouns are formed by the combination of either ngini-, (ng)angi- or kapi-, denoting a masculine singular, feminine singular and plural possessum respectively, to the emphatic personal pronouns. The prefix agrees with the possessum for number and gender while the pronominal stem denotes the possessor. A regular morphophonological process wherein identical or very similar syllables coalesce into a single syllable affects many of the feminine singular forms, such that (ng)angi- + ngilawa surfaces as (ng)angilawa rather than (ng)angingilawa (Lee, 1987:109). Apart from this change, all other forms are predictable as shown in Table 9.

<table>
<thead>
<tr>
<th>Possessor</th>
<th>Possessum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1MIN</td>
<td>nginingilawa</td>
</tr>
<tr>
<td>1/2MIN</td>
<td>nginginuwila</td>
</tr>
<tr>
<td>2MIN</td>
<td>nginginginjila</td>
</tr>
<tr>
<td>3MIN M</td>
<td>ngingingatawa</td>
</tr>
<tr>
<td>3MIN F</td>
<td>nginginjita</td>
</tr>
<tr>
<td>1AUG</td>
<td>nginginawila</td>
</tr>
<tr>
<td>2AUG</td>
<td>nginginuwila</td>
</tr>
<tr>
<td>3AUG</td>
<td>ngingiwutawa</td>
</tr>
</tbody>
</table>

Due to the syncretism of 1AUG with 1/2AUG (see Table 8), possessive pronouns, or indeed any pronouns built on the emphatic forms, do not contrast 1AUG with 1/2AUG.
Syntactically, these possessive pronouns function as the head of a possessive noun phrase, as in (29), in which *nganginyitawa* ‘hers’ functions as the object.

(29) nyirra-tuwu a- mpu- ngupu- pu- rrajiyangirri *nganginyitawa*
    3MIN.F -CT 3MINS.F- NPST- 1AUGOBL- 3 F.SG<3MIN.F
    ‘she forces hers (her law) onto us’ (Lee, 1987:109)

The personal pronouns listed in Table 8 can be marked with further affixes to derive pronouns with more nuanced meanings. These affixes are -amiya reflexive, -tuwu contrastive topic, and -yati cooperative.

The pronominal suffix -amiya is form-identical with the reflexive verb suffix, though it has a slightly different meaning. When marked on the verb, the reflexive suffix -amiya marks the object of the verb as coreferential with the subject, as in (30).

(30) ngurrwawurrinamiya 
    ngi- rri- wawurrini-amiya 
    1MIN- PST- cut -REFL
    ‘I cut myself’ (AW_20120411_01: 00:06:24)

When affixed to an emphatic personal pronoun however, the resulting pronoun can have the sense of ‘by oneself’ or ‘for oneself’ as shown in (31). The pronoun here cannot be marking the coreference of subject and object, since the verb -apurti is intransitive and takes only a subject.

(31) ngataw-amiya a- papurti 
    3MIN-REFL 3MIN.M.NPST- go_up
    ‘he goes up (to the bush) for himself’ (Lee, 1987:112)

There is no evidence of this pronominal use of the -amiya suffix denoting reflexivity within the argument structure. In using the term ‘reflexive’ to refer to such pronouns, I do not intend to imply that they function in an equivalent or even similar way to verbs that are marked with the reflexive marker. The use of reflexive-marked pronouns in Tiwi mirrors the use of English reflexive pronouns to indicate emphasis rather than agent-patient coreference.

Lee (1987:111) claims that the reciprocal suffix -ajirri, found in the same verbal slot as the reflexive suffix -amiya, may also be suffixed to a free pronoun. The only evidence for this is a
personal communication between Lee and Marie Godfrey, and no examples exist in the corpus. The reported example given is *muwilajirri* ‘between you and me’.

Another pronominal suffix, *-tuwu*, signals a change of participant. Lee (1987:107-08) calls the resulting pronouns ‘alternate pronouns’ in the sense that they highlight the switch from one referent to another, and glosses them as TOPic. Osborne (1974:136) does not discuss these forms in his grammar at all, but lists the suffix in his dictionary as a clitic meaning ‘too’. In my own recordings, these pronominal forms are usually translated into English as ‘my turn’ or ‘me now’, and several examples in the corpus such as (33) below, indicate a switch between referents, and moreover, a contrast between them.

As such, I analyse them as contrastive topic (CT). The *-tuwu* suffix is most commonly attached to the emphatic form of the pronoun, as in (32), but can be attached to the basic form as well, as in (33) and (34).

(32)  
\begin{align*}  
  & \textit{ngilatuwa ngumanikiringa} \\
  & \textit{ngilawa } \textbf{-tuwu } \textit{ngi- mani- kiri- nga} \\
  & 1\text{MIN } \textbf{-CT} \quad 1\text{MIN}.\text{NPST- }2\text{AUGO- hand- grab} \\
  & \textit{‘my turn now, I’ll grab you lot by the hands’} \\
  & \textit{(AW_20120301_02: 00:14:17)} \\
\end{align*}

(33)  
\begin{align*}  
  & \textit{miringayi ji-yi mi, kiyi ngarratuwu pirlinkiti yimi} \\
  & \textit{miringayi ji- mi kiyi ngarra } \textbf{-tuwu } \textit{pirlinkiti yyi- mi} \\
  & \textit{happy }3\text{MIN}.\text{F}.\text{PST- do then }3\text{MIN}.\text{M } \textbf{-CT} \quad \textit{cry }3\text{MIN}.\text{M}.\text{PST- do} \\
  & \textit{‘she was happy, then he started to cry’} \quad \textit{(AW_20120307_01: 00:02:20)} \\
\end{align*}

(34)  
\begin{align*}  
  & \textit{waya nguwunjumiringarra, ngjinjatuwu jamiringarra} \\
  & \textit{waya } \textit{ngi- wunjingu- miringarra nginja } \textbf{-tuwu } \textit{ji- a- miringarra} \\
  & \textit{NFUT }1\text{MIN}.\text{NPST- DUR- sit } 2\text{MIN } \textbf{-CT} \quad 2\text{MIN}.\text{PST- IMP- sit} \\
  & \textit{‘I’m sitting down. You too, sit down!’} \quad \textit{(AW_20120410_01: 00:38:53)} \\
\end{align*}

Osborne (1974:56) also describes what he calls ‘collective’ pronouns that are formed from emphatic pronouns prefixed with *nginingaji*. He lists three forms as follows:

(35)  
\begin{align*}  
  & \textit{nginingajingawila} \quad \text{the whole lot of us} \\
  & \textit{nginingajinuwila} \quad \text{the whole lot of you} \\
  & \textit{nginingajiwutawa} \quad \text{the whole lot of them} \\
\end{align*}

---

17 Marie Godfrey worked alongside Lee as a linguist from the Summer Institute of Linguistics (SIL).
While no examples of these collective pronouns exist in the present corpus, Lee (1987:113) notes that the prefix is form-identical with a manner preposition meaning ‘like’, and treats these constructions as idioms. They are treated as separate words, she says, because “older Tiwi people who can write seem to always write them as two words and so they are really [sic] phrases, though they cannot be translated as ‘like us’” (Lee, 1987:113). She provides two examples reproduced below. One of them, (36), shows that the collective prefix need not occur only with augmented pronouns.

(37) nginingaji ngawila arikutumuruwi
   like 1AUG people
   ‘all of us people’ (Lee, 1987:113)

(36) ngatingaji ngatawa murrakupupuni
   like 3MIN country
   ‘the whole world’ (Lee, 1987:113)

While I was unable to find any examples of these collective pronouns in my corpus, another pronoun form with a related meaning is frequently seen in my own recordings, but not described at all by Lee or Osborne. A suffix -yati, which mirrors the numeral yati ‘one’, may attach to pronouns that have more than one person as their referent, that is, any of the augmented pronouns and the 1/2MIN. The resulting pronouns have the additional meaning of togetherness or cooperation. Cooperative pronouns (abbreviated COOP) are recognised by people who can understand but not speak Traditional Tiwi, and are translated into English as ‘together’.

(38) ngawiyati ngarulimpangapa
    ngawa -yati nga- ru- limpangi- apa
    1/2AUG -COOP 1/2AUG.NPST- ?- meat- eat
    ‘we all eat together’ (AW_20120413_03: 00:06:01)

(39) nuwiyati nyirapa
    nuwa -yati nyi- apa
    2AUG -COOP 2AUG.NPST- eat
    ‘you all eat together’ (AW_20120413_03: 00:06:59)

(40) muwiyati muramukurughi
    muwa -yati mu- amukurughi
    1/2MIN -COOP 1/2MIN.NPST- make_camp
    ‘you and me will lie here together’ (AW_20120411_03: 00:09:12)
I cannot say whether Traditional Tiwi had or still has the collective forms identified by Osborne as the evidence for them is scant, but it is certain that the cooperative pronouns formed with -yati are legitimate members of the set.

4.2.2.2 Impersonal pronouns

Impersonal pronouns (Lee, 1987:114-17) include interrogative, negative and indefinite pronouns and mean ‘who/what’, ‘nobody/nothing’, and ‘someone/something’ respectively. All forms are built on the stems kuwa- for human referents, and kami- for non-human referents, and both the negative and indefinite forms are derived from the interrogative forms by the prefixes karri- negative, and arramu- indefinite (Lee, 1987:114-15; Osborne, 1974:56-57).

Morphologically, the impersonal pronouns function similarly to nominals (see §4.2.1) in that they show the same three-way contrast between masculine singular, feminine singular, and plural, of their referents. The forms of the impersonal pronouns are provided in Table 10.

<table>
<thead>
<tr>
<th></th>
<th>M.SG</th>
<th>F.SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>interrogative</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>human</td>
<td>kuwani</td>
<td>kuwanga</td>
<td>kuwapi</td>
</tr>
<tr>
<td>nonhuman</td>
<td>kamini</td>
<td>kamunga</td>
<td>kamuwi</td>
</tr>
<tr>
<td><strong>negative</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>human</td>
<td>karrikwani</td>
<td>karrikuwanga</td>
<td>karrikuwapi</td>
</tr>
<tr>
<td>nonhuman</td>
<td>karrikamini</td>
<td>karrikamunga</td>
<td>karrikamuwi</td>
</tr>
<tr>
<td><strong>indefinite</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>human</td>
<td>arramukwani</td>
<td>arramukuwanga</td>
<td>arramukuwapi</td>
</tr>
<tr>
<td>nonhuman</td>
<td>arramukamini</td>
<td>arramukamunga</td>
<td>arramukamuwi</td>
</tr>
</tbody>
</table>

Impersonal pronouns often serve as the only overt element of a noun phrase as shown in examples (42) through to (44).
Furthermore there are examples, such as (45) and (46) in which the impersonal pronouns occur only with demonstratives. These are not clear examples of impersonal pronouns functioning as modifiers however, since they consist of two separate noun phrases; the first functioning as the subject and the second functioning as the predicate.

(45)  
kuwapi awuta  
kuwapi  awuta  
who.PL  DIST.PL  
‘who are they?’  
(CO_709A: 00:21:59)

(46)  
kamunga awunyirra  
kamunga  awunyirra  
what.F  DEM.F  
‘what’s that?’  
(CO_709A: 00:23:32)

The negative pronouns are rare in the recorded corpus, but karrikamini is used frequently to mean ‘nothing’, as the following dyad shows.

(47a)  
jinuwapa inayi yinkitana  
ji- wuni- apa  inayi  yinkiti =ana  
2MIN.PST- LOC- eat  DIST.M  food =Q  
‘did you eat that food?’  
(AW_20120413_01: 00:17:09)

(47b)  
karlwu, karrikamini  
karlwu  karrikamini  
NEG  nothing.M  
‘no, nothing’

The corpus contains no examples of the indefinite pronouns, but Osborne (1974:57) describes them as meaning ‘someone’ or ‘something’. He provides the following dyads to exemplify their use.
(48a)  

\textit{kuwani yikirimi}  
kuwani yi- kirimi  
who.M 3MIN.M.PST- do  
‘who did it?’  

(48b)  

\textit{arramukuwani}  
\textit{arramukuwani}  
someone.M  
‘someone or other’ 
(Osborne, 1974:57)  

(49a)  

\textit{kamini nginayi}  
kamini nginayi  
what.M DIST.M  
‘what’s that?’  

(49b)  

\textit{arramukamini}  
\textit{arramukamini}  
something.M  
‘something or other’ 
(Osborne, 1974:57)  

The \textit{arramu-} prefix is transparently derived from a particle \textit{arramukuta} ‘perhaps/maybe’ (Lee, 1987:114).  

(50)  

\textit{ampunukura arramukuta}  
a- mpi- ni- kura  
3MIN.F- NPST- 3MINOBL.M.IRR- die  
\textit{arramukuta}  
perhaps  
‘he might die’ 
(AW_20120301_02: 00:02:40)  

\subsection*{4.2.2.3 Demonstratives}  

Demonstrative pronouns (Osborne, 1974:56; Lee, 1987:117-22) show the same semantic categorisation as nominals and impersonal pronouns in that they encode the gender and number of their referent, although unlike the impersonal pronouns they do not contrast human with non-human referents. They do however, encode distance from the speaker: proximal, near the speaker, and distal, not near the speaker. Demonstratives can either modify the head of a noun phrase or they can function as the head themselves.  

Lee (1987:119) argues for a separate, additional category to demonstratives which she labels ‘definitives’. Definitives function exactly the same as demonstratives in their morphological distinctions and their distribution although semantically they do not encode distance. I instead argue that these are demonstratives that are unmarked for distance. Similar
demonstratives have been demonstrated in languages such as French and colloquial German (Himmelmann, 1997:53) and Alamblak (Bruce, 1984:81).

The demonstratives are given in Table 11. Note that while the proximal and distal demonstratives are clearly formally related to each other, the unmarked demonstratives are distinct.

Table 11: Traditional Tiwi demonstrative pronouns

<table>
<thead>
<tr>
<th></th>
<th>M.SG</th>
<th>F.SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>unmarked</td>
<td>aw(ung)arra</td>
<td>awunyirra</td>
<td>awuta</td>
</tr>
<tr>
<td>proximal</td>
<td>(ng)inaki</td>
<td>a(ngi)naki</td>
<td>(k)apinaki</td>
</tr>
<tr>
<td>distal</td>
<td>(ng)inayi</td>
<td>a(ngi)ayi</td>
<td>(k)apinayi</td>
</tr>
</tbody>
</table>

The proximal and distal forms explicitly mark distance of the referent from the speaker. For example, (51) and (52) refer to entities near the speaker whereas (53) and (54) refer to entities relatively distant from the speaker.

(51)  
*anaki tinga jamarruri kapi nyirra punayi*

*anaki*  
PROX.F woman 2MIN.PST- IMP- COM- go PREP 3MIN.F husband

‘take this woman to her husband’  
(AW_20120411_02: 00:44:14)

(52)  
*apinaki yuwurrara purruminikiringa*

*apinaki*  
PROX.PL two 3AUGS- PST- 1MINS- hand- grab

‘these two grabbed me by the hand’  
(AW_20120301_02: 00:13:43)

(53)  
*jayakirayi nginayi tini*

*ji- a- akirayi nginayi tini*

2MIN.PST- IMP- give DIST.M man

‘you give it to that man’  
(AW_20120410_01: 00:21:33)

(54)  
*apinayi malakaningwui wuwunjingupirnajirri*

*apinayi*  
DIST.PL young_man.PL 3AUG.NPST- DUR- hit- RECIP

‘those young men are hitting each other’  
(AW_20120406_01: 00:25:15)

Lee (1987:145) also suggests that the proximal and distal demonstratives can be used in discourse to indicate a contrast between more recently mentioned and less recently mentioned
participants, although she presents no data to confirm this and corpus data is insufficient to support the claim.

The unmarked demonstrative pronouns are used when the distance of the referent from the speaker is not a salient feature.

(55) \textit{awuta yuwurrara kakirijuwi}  
\textit{awuta} yuwurrara kakirijuwi  
\textbf{DEM.PL} two child.pl  
‘the two children’  

While I analyse these forms as demonstratives, I do not claim that they occur on the same distance scale as the proximal and distal demonstratives. That is, they do not encode medial distance. Rather, they deictically refer to entities for which distance is not important. There is further evidence for this in that the neutral demonstratives can co-occur with both proximal and distal demonstratives, as in (56) and (57) respectively. Therefore, the unmarked demonstratives, such as \textit{awarra} and \textit{awuta} in the following examples, are not in a paradigmatic relationship to the proximal and distal demonstratives.

(56) \textit{kamini awarra nginkaki}  
kamini awarra nginaki  
what.\textbf{M} \textbf{DEM.M} PROX.M  
‘what is that (thing) here?’  

(57) \textit{aripukirimi awuta apinayi tiwi}  
a- ripu- kirimi awuta apinayi tiwi  
3MIN.S.M.NPST- 3AUGOBL- make \textbf{DEM.PL} DIST.PL people  
‘he’ll do it for those people there’  

Lee (1987:119) argues that the neutral demonstratives should be analysed as having the same pragmatic function as definite articles; that they merely contribute definiteness rather than any deixis. She provides a rough English paraphrase of her analysis of their meaning: ‘that one/thing (that we know or we have talked about)’. Calling these forms definite articles however, is problematic since they can constitute a complete noun phrase, as in examples (58) and (59). However as Dixon (2003:69) argues, definite articles cannot constitute an entire noun phrase.
Note that in both examples above, and also in example (57), the unmarked demonstratives function as objects. Example (59) in particular shows the demonstrative occurring alongside a personal pronoun ngarra ‘he’, in which the pronoun refers to the subject and the demonstrative refers to the object. It is possible that the distribution of personal or demonstrative pronouns differs with respect to the grammatical function of the referent, and is therefore a way of encoding grammatical functions outside of the inflecting verb. However, no clear conclusions can be drawn, as there is too little data relating to the relative distribution of these pronouns with respect to each other and with respect to their grammatical functions.

4.2.3 Verbs

Verbs in Traditional Tiwi are the most morphologically complex part of speech in the language. Verbs are easily demarcated from the other word classes on the basis of their morphology; verbs are obligatorily marked for subject and, if the verb requires, an object or oblique argument as well. Verbs also obligatorily mark tense, either past or non-past. There are several optional categories that are marked on the verb as well, including aspect and mood, time of day, distance from the speaker or direction with respect to the speaker, associated motion, incorporated nominals, incorporated verbs, and incorporated comitative/privative nominals.

Osborne (1974:37-38) identifies 12 prefixes and 3 suffixes in addition to the stem, although he does not describe the verb in terms of a template beyond listing prefixes and suffixes, and some of the morphemes that he identifies are not evidenced by the data. Lee (1987:152-53)

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\[58\] nga- ø- pakurluwunyi awarra
1/2AUGS.NPST- 3MINO- see DEM.M
‘we look at that one’

\[59\] ngarra awarra yimi
ngarra, awarra, yi- ø- mi
3MIN.M, DEM.M, 3MIN.PST(O:M)- 3MINO- do
‘[he] did it [to him]’

(Lee, 1987:120)

(AW_20120413_03: 00:32:11)
improves on Osborne’s description by setting out the verb as a template and providing a more plausible account of some of the affixes. Lee’s description however, still poses significant problems, particularly with respect to agreement morphology, as discussed in §4.2.3.1.

Another area that has been problematic for a thorough description of Traditional Tiwi is incorporation. Inflecting verbs allow the incorporation of nominal and verbal lexical elements. Incorporation is not unique to Tiwi, but the behaviour of incorporation in Tiwi brings new data to the cross-linguistic investigation of incorporation. Incorporation is discussed further in §4.2.3.2.

### 4.2.3.1 Agreement morphology and tense

Verb agreement with subjects and objects, and the complex interaction of these with tense marking, form an area of Traditional Tiwi verb morphology that lacks an adequate explanation.

Osborne’s (1974:38) original paradigm of basic forms of the subject is given in Table 12. Due to the extensive differences in orthography and analysis, this table also contains, in parentheses, the same form using the modern orthography.\(^{19}\) It is otherwise identical to Osborne’s original.

<table>
<thead>
<tr>
<th></th>
<th>non-past</th>
<th>past</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>(\eta\eta)</td>
<td>(\eta\eta)</td>
</tr>
<tr>
<td>2.</td>
<td>(\eta\eta-\eta)</td>
<td>(\eta\eta)</td>
</tr>
<tr>
<td>3.</td>
<td>(a)</td>
<td>(ji)</td>
</tr>
<tr>
<td>4.</td>
<td>(mu)</td>
<td>(mu)</td>
</tr>
<tr>
<td>Plural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>(\eta\eta-\eta)</td>
<td>(\eta\eta)</td>
</tr>
<tr>
<td>2.</td>
<td>(\eta\eta-\eta)</td>
<td>(\eta\eta)</td>
</tr>
<tr>
<td>3.</td>
<td>(wu)</td>
<td>(pu)</td>
</tr>
<tr>
<td>4.</td>
<td>(\eta\eta)</td>
<td>(\eta\eta)</td>
</tr>
</tbody>
</table>

Osborne’s (1974:38) analysis of the subject bound pronouns is problematic for several reasons. One of the more critical problems for his analysis is that he does not consistently consider the subject and tense markers as either portmanteau, or distinct. As shown in Table 12, Osborne

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\(^{19}\) The forms in parentheses only show updated orthography. They do not reflect my analysis.
considers the tense markers *mpi-* and *nti-* to be portmanteau with the subject markers, but does not treat the tense marker *rri-* in the same way, and it is not listed in the table above. This point is further made by considering two extracts from Osborne’s grammar (emphasis added).\(^{20}\)

Person, number and gender of subject and expressed by means of the subject prefixes or (as some of the subject prefixes are homophonous) by means of a subject prefix plus a tense marker *mpi-* or *nti-*: The expression of subject is generally inseparable from the expression of tense as, in most cases, the two are done by the same morphemes or morpheme sequences. (Osborne, 1974:38)

This extract makes it clear that Osborne considers the morphemes *mpi-* and *nti-* to be tense markers, and furthermore summarises his claim that subject and tense are inseparable.

The other extract, only three pages later, is seemingly at odds with the above (emphasis added).

Non-past verbs have one of the non-past set of forms listed in [Table 12], but are not otherwise marked for tense. Past tense verbs are formed by (a) selecting one of the past tense set of subject forms, and (b) inserting the past tense marker *rri-* wherever the subject form carries no tense meaning. (Osborne, 1974:41)

There are two important things to note here. The first is that several of the non-past forms listed in Table 12 contain a tense marker, specifically *mpi-*, yet here he claims they are not marked for tense. Secondly, this extract makes it certain that Osborne takes forms such as *nga-nti- ‘1/2AUG.PST’* to be fused forms in the sense that the are ‘subjects that carry tense meaning’.

Overall then, Osborne wavers between two opposed analyses; on one hand, subjects and tenses are inseparable and jointly encode both subject and tense, and on the other, a separate morpheme encodes past tense, but only for some subjects. Given this, Osborne would analyse two basic inflecting verbs differently, depending on which subject occurred. If the subject was 1st person minimal, then it would be analysed as in (60), and if it was 1st person augmented, it would instead be analysed as in (61).

\(^{20}\) To assist the reader, I have modified extracts from Osborne’s (1974) description to reflect the modern orthography.
However, the examples Osborne provides are generally not given with interlinear glosses, and as such it is difficult to see how his analysis works from his annotations. Examples (62) and (63) below, are reproduced exactly as presented in Osborne’s (1974:41) grammar, with original glossing and orthography. Note the emergence of the nasal segment of the tense markers, although Osborne considers it to be a part of the subject marker instead.

(62) ŋəm-p-apa
We ex eat  
(Osborne, 1974:41)

(63) ŋən-tu-apa
We ex ate  
(Osborne, 1974:41)

Under the analysis that Osborne presents, given in the quotes above, these tense markers are taken to be fused with the subject marker. However other examples that include the rri- past tense marker, which Osborne takes to be a distinct morpheme, are presented as being morphologically parallel. Example (64) below illustrates this.21

(64) mu-ru-apa
You sg and I ate  
(Osborne, 1974:41)

There is little evidence to treat the tense markers mpi- and nti- any differently from the rri-tense marker, and my analysis considers them to function the same as one another structurally. Moreover, my analysis simplifies the system and the description of the observed phenomena by introducing another tense marker, a zero-morpheme, into the paradigm, shown in Table 15 in this section.

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21 Osborne uses the grapheme r to indicate the alveolar rhotic, which I represent as rr.
Another significant problem for Osborne’s analysis is that the subject and tense markers behave differently where the verb encodes a 3rd person minimal object. However, his account of the differences in behaviour, given below, does not help to clarify the situation.

If third-person-singular direct object is present there are the following changes in the subject forms: (1) *nyi*- is used for second-person subject, whether singular or plural, non-past or past. (2) *mpi*- and *nti*- are deleted when a masculine third-person-singular direct object is present. (3) *mpi*- or *nti*- is inserted in all subject forms except *yi*- and *ji*- when there is a feminine third-person-singular direct object. When third-person-singular direct object co-occurs with third-person-singular subject in pst tense verbs the subject prefixes *yi*- and *ji*- are used to express gender of object, and gender of subject is neutralised. (Osborne, 1974:41)

Recall in earlier extracts, Osborne claims that *mpi*- and *nti*- are fused with subject marking and form portmanteau morphemes. The extract here presents an analysis that directly contradicts this claim; that the tense markers are inserted or deleted depending on the morphological context, and therefore, cannot be fused with the subject markers. As such, the behaviour of the subject and tense markers when the verb encodes a 3rd person object further problematises Osborne’s analysis.

My own analysis of the observed phenomena, presented in full in chapter 6, is an improvement on the current knowledge of Traditional Tiwi, as it allows for the complete separation of the subject bound pronoun paradigm from the tense paradigm, apart from a small number of genuinely fused, portmanteau forms. My analysis raises problems in other areas, particularly with the complex morphological interaction between subject, tense and object marking, and the emergence of a phenomenon I call Agreement Shift. While Osborne’s account of these morphological changes is observationally correct in that it produces the observed surface forms, it also obscures these interesting phenomena. This is another reason that an improved analysis of Tiwi verb morphology is needed.

Lee (1987) is an improvement on the description of Traditional Tiwi verb morphology relative to Osborne (1974) in the sense that she clarifies Osborne’s analysis and provides a more consistent paradigm. However, she does not significantly diverge from Osborne with respect to the observed morphological phenomena. Table 13 presents Lee’s (1987:173) paradigm of all subject bound forms in all circumstances. This paradigm lists forms when the verb encodes a
3rd person object of either gender, and therefore lists the forms for which Osborne (1974:41) provides a long list of morphological changes (given in the extract above).

Table 13: Traditional Tiwi subject/tense prefix paradigm (Lee, 1987:173)

<table>
<thead>
<tr>
<th></th>
<th>general</th>
<th>3MIN object</th>
<th>feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>NPST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1MIN</td>
<td>ngi-</td>
<td>ngi-</td>
<td>ngi-mpi-</td>
</tr>
<tr>
<td>1/2MIN</td>
<td>mu-</td>
<td>mu-</td>
<td>mu-mpi-</td>
</tr>
<tr>
<td>2MIN</td>
<td>nyi-mpi-</td>
<td>nyi-</td>
<td>nyi-mpi-</td>
</tr>
<tr>
<td>3MIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>a-</td>
<td>a-mpi-</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>a-mpi-</td>
<td>a-</td>
</tr>
<tr>
<td>1AUG</td>
<td>ngi-mpi-</td>
<td>ngi-</td>
<td>ngi-mpi-</td>
</tr>
<tr>
<td>1/2AUG</td>
<td>nga-</td>
<td>nga-</td>
<td>nga-mpi-</td>
</tr>
<tr>
<td>2AUG</td>
<td>ngi-mpi-</td>
<td>nyi-</td>
<td>nyi-mpi-</td>
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<td>3AUG</td>
<td>wu-</td>
<td>wu-</td>
<td>wu-mpi-</td>
</tr>
<tr>
<td>PST</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1MIN</td>
<td>ngi-</td>
<td>ngi-</td>
<td>ngi-ni-</td>
</tr>
<tr>
<td>1/2MIN</td>
<td>mu-</td>
<td>mu-</td>
<td>mu-ni-</td>
</tr>
<tr>
<td>2MIN</td>
<td>ji-</td>
<td>nyi-ni-</td>
<td>jji-</td>
</tr>
<tr>
<td>3MIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>yi-</td>
<td>ji-</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>ji-</td>
<td>yi-</td>
</tr>
<tr>
<td>1AUG</td>
<td>ngi-ni-</td>
<td>ngi-</td>
<td>ngi-ni-</td>
</tr>
<tr>
<td>1/2AUG</td>
<td>nga-ni-</td>
<td>nga-</td>
<td>nga-ni-</td>
</tr>
<tr>
<td>2AUG</td>
<td>ngi-ni-</td>
<td>nyi-ni-</td>
<td>nyi-ni-</td>
</tr>
<tr>
<td>3AUG</td>
<td>pi-ni-</td>
<td>pi-ni-</td>
<td>pi-ni-</td>
</tr>
</tbody>
</table>

This paradigm immediately makes it apparent that there are certain correspondences that hold over the entire agreement system. For example, the tense markers mpi- and nti- are clearly associated with a feminine 3rd person minimal object, and the tense marker rri-, as well as the zero-morpheme (not listed in Table 13) are as clearly associated with a masculine 3rd person minimal object. Finally, the last column, denoting the forms of the subject and tense markers where the verb stem is of a small class of ‘feminine’ verbs, is clearly identical to the third column, which lists the forms of the subject and tense markers where a feminine 3rd person minimal object is present. The morphological behaviour of these feminine verbs is discussed in §6.3.

---

22 The form of the 2nd person augmented pronoun in the ‘general’ column is taken by both Osborne and Lee to be ngi- and therefore homophonous with 1st person minimal and 1st person augmented. In each of the other columns however, the form is ngi-, which is identical to the 2nd person minimal pronoun in the non-past tense. As explained in §5.1.1, I believe the data shows that this pronoun is always ngi- and that the form ngi- given in Table 13 is erroneous.
This paradigm is very closely based on Osborne’s account and is just as observationally correct. However, it is similarly limited in that it does not draw attention to the interesting empirical phenomena that Traditional Tiwi verb morphology exhibits, such as subject classes, agreement shift and lexicalised agreement.

As a result of my analysis, which is fully described in chapter 6, the subject bound pronoun paradigm can be reduced to that shown in Table 14, and the tense markers represented in their own very simple paradigm as shown in Table 15.

Table 14: Traditional Tiwi subject bound pronouns

<table>
<thead>
<tr>
<th>Number Person</th>
<th>Class</th>
<th>Tense</th>
<th>Class</th>
<th>Tense</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A</td>
<td>npst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2</td>
<td>A</td>
<td>mpu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td>npst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>npst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>npst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>B</td>
<td>npst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2</td>
<td>A</td>
<td>mpu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td>npst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>A</td>
<td>npst</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 15: Traditional Tiwi tenses

<table>
<thead>
<tr>
<th>Class A</th>
<th>Class B</th>
</tr>
</thead>
<tbody>
<tr>
<td>npst</td>
<td>mpu</td>
</tr>
<tr>
<td>pst</td>
<td>nti</td>
</tr>
</tbody>
</table>

To illustrate these paradigms, example (61) above can therefore be reconsidered, and glossed as in (65).

(65) (=61)

ngagha waya nguntumanipirni
ngagha waya ngi- nti- mani- pirni
1AUG NFUT 1AUGS- PST(B)- 2AUGO- hit
‘we hit you (pl)’

(CO_707B: 00:11:41)

For a full explanation of my analysis of the Traditional Tiwi agreement system, particularly of subject classes, and the mechanisms that underlie agreement shift, see chapter 6.
4.2.3.2 Incorporation

Traditional Tiwi also exhibits incorporation, whereby lexical elements are incorporated into inflecting verbs. In Traditional Tiwi, both nominal and verbal elements can be incorporated into verbs.

Osborne (1974:47-50) does not describe incorporation in Traditional Tiwi beyond listing a number of incorporated forms and providing some examples. Lee (1987:160-67) improves on this by discussing each type of incorporation separately and explaining the relationship between the incorporated elements and the argument structure of the verb, that is, whether an incorporated nominal functions as a subject or object, and whether an incorporated verb is understood as being performed by the subject of the main verb or a different argument.

Incorporation in Traditional Tiwi is not productive. There is a closed class of nominal and verbal elements that can be incorporated into inflecting verbs. Lee (1987:160) puts the figure at between 100 and 150, although many more may have existed. Generally speaking, the semantic range of the incorporated element is broader than corresponding free elements. However there are examples of incorporated elements that are more semantically specific than their corresponding free forms. Some of these are shown in Table 16.

Table 16: Semantic correspondence between incorporated and free elements

<table>
<thead>
<tr>
<th>Incorporated form</th>
<th>Free form</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>paningi</em>-</td>
<td><em>paningkapa</em></td>
</tr>
<tr>
<td><em>kuntingi</em>-</td>
<td>‘cooked meat (or fish)’</td>
</tr>
<tr>
<td><em>alipi</em>-</td>
<td>‘cooked meat (cut up)’</td>
</tr>
<tr>
<td><em>atyingi</em>-</td>
<td><em>yikwani</em></td>
</tr>
<tr>
<td><em>ki</em>-</td>
<td>‘firewood’</td>
</tr>
<tr>
<td></td>
<td>‘fire’</td>
</tr>
</tbody>
</table>

In addition, there are some incorporated forms for which no corresponding free forms exists. Examples include *mapi-* ‘corpse’ and *wunji-* ‘sick person’.

Only a few incorporated forms can be phonologically related to an independent form; the vast majority of incorporated forms cannot. As Dixon (1980:437) argues, this may be due to lexical replacement caused by taboo. If a free form becomes taboo, it can be temporarily taken out of the system or replaced altogether. An incorporated form that is derived from the taboo free
form however is not taken out of the system, but undergoes phonological reduction as a result of the incorporation process. After some time, the incorporated forms no longer resemble the free forms.

Table 17 lists some incorporated forms that differ from corresponding free forms and Table 18 lists those identified by Lee (1987:161) as being phonologically relatable to corresponding free forms, even if they differ slightly in meaning.

Table 17: Dissimilarity of some incorporated forms (Osborne, 1974:47-50)

<table>
<thead>
<tr>
<th>Incorporated form</th>
<th>Free form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ki-</td>
<td>yikwani</td>
</tr>
<tr>
<td>kiri-</td>
<td>yikara</td>
</tr>
<tr>
<td>kuwa-</td>
<td>gilati</td>
</tr>
</tbody>
</table>

Table 18: Phonological similarity of incorporates (Lee, 1987:161)

<table>
<thead>
<tr>
<th>Incorporated form</th>
<th>Free form</th>
</tr>
</thead>
<tbody>
<tr>
<td>makirri(ngi)-</td>
<td>-makirri</td>
</tr>
<tr>
<td>wulinji(ngi)-</td>
<td>wulinjirri</td>
</tr>
<tr>
<td>kiri-</td>
<td>kirikurti</td>
</tr>
<tr>
<td>mili-</td>
<td>milikurti</td>
</tr>
<tr>
<td>mangi-</td>
<td>mangupurani</td>
</tr>
</tbody>
</table>

When incorporated, nominals are associated with a grammatical function. Lee (1987:162) provides examples showing an incorporated nominal being associated with an intransitive subject (66), an object (67) and an oblique (68):

(66) ngarra-tuwu yu-**warla**- yapipirraya Purrrukuparli
    3MIN.M -CT 3MIN.M.PST- **spirit**- go_down PN
    ‘Purrrukuparli went down as a spirit’ (Lee, 1987:162)

(67) pi- rri-**kiji**- unyaw -ani
    3AUG- PST- **stick**- throw -ITER
    ‘they would throw the stick’ (Lee, 1987:162)

(68) piraya-la ngi- mpi- ripu-**warla**- mi
    pray -ITER 1AUGS- NPST- 3AUGOBL- **spirit**- do
    ‘we pray for the dead’ (Lee, 1987:162)

I argue in chapter 7 that incorporated nominals are always associated with the lowest grammatical function. In the examples above, the incorporated nominal is associated with the subject when the verb is intransitive, with the object when it is transitive, and with the
oblique argument if there is one. This predicts that a nominal cannot be incorporated into a transitive verb such that it is associated with the subject. In this regard, incorporation in Tiwi aligns with similar phenomena described for Australian languages such as Bininj Gun-Wok (Evans, 2003:451) and Rembarrnga (Saulwick, 2003), in which the incorporated element is in an absolutive relation to the verb.

My own data, as well as data contained within Osborne’s recordings, suggest that, just as incorporated nominals are associated with the lowest grammatical function, incorporated verbs are similarly understood as being performed by the lowest grammatical function.23 That is, if the verb is intransitive, the incorporated verb is predicated of the subject, as it is the only available argument, whereas in transitive verbs it is predicated of the object, as shown below.

\[
\begin{align*}
(69) & \quad \text{nu- rri- ki- ungirlimpangi- rrangurlimayi} \\
& 1/2\text{MIN- PST- EVE- sleep- walk} \\
& \text{‘you and I walked in our sleep’} \quad \text{(Lee, 1987:163)} \\
\end{align*}
\]

\[
\begin{align*}
(70) & \quad \text{yuwatuminingirlipangipirni} \\
& \text{yi - wati - mini - ungirlimpangi - pirni} \\
& 3\text{MINS.M.PST - MORN - 1MINO - sleep - hit} \\
& \text{‘he hit me while I was sleeping’} \\
& \text{‘he hit me in his sleep’} \quad \text{(AW_20120413_03: 00:37:43)}
\end{align*}
\]

In chapter 7 I extend the analysis of incorporation in Traditional Tiwi and discuss it with respect to analyses of incorporation phenomena cross-linguistically.

### 4.2.4 Coverbs

Coverbs are a part of speech distinct from both verbs and nominals. They are independent lexical elements that take no morphology whatsoever.24 They do not inflect for tense or agree

---

23 Incorporated verbs, according to Lee (1987:163-4), are generally predicated of the subject of the inflecting verb, “but not always”. Sometimes the incorporated verb is predicated of a participant who is not even present in the verb, as in the following:

\[
\begin{align*}
& \text{ngi- nti- wati- ungirlimpangi- rramilipur -ani} \\
& 1\text{AUG- PST- MORN- sleep- get_up-ITER} \\
& \text{‘we would get up while (others) are sleeping’} \quad \text{(Lee, 1987:163)}
\end{align*}
\]

There are no examples like this in my corpus of recordings.

24 Lee identifies one suffix, -la, that can be attached to coverbs to indicate iterativity, reproduced below. No further examples could be found in the corpus. It is possible that this morpheme attaches only to loanwords such as piraya ‘pray’.
for grammatical functions as verbs do, nor do they mark gender or number, as nominals do. Semantically, they encode events, such as *goyi* ‘dance’, *mwaliki* ‘swim’ and *mitaya* ‘steal’.

Osborne (1974:58-59) labelled this category ‘verbal nouns’, whereas Lee (1987:203-05) used the term ‘free form verbs’. I instead use the term ‘coverb’ because they behave very similarly to a class of word that has been identified in several languages in Australia’s north, such as Wagiman (S Wilson, 1999; A Wilson, 2006) and Jaminjung (Schultze-Berndt, 2000).

Coverbs are distinct from inflecting verbs in the languages that possess them, in that they are non-finite (Amberber, Baker, & Harvey, 2010:1). This means they cannot head finite clauses themselves. Coverbs can, however, head non-finite clauses or they can combine with a finite verb, usually taken from a restricted set of semantically bleached ‘light’ verbs (Jespersen, 1965; Butt, 2003, 2010), in which case the coverb and inflecting verb jointly form a ‘complex predicate’ (Butt, 2010:49).

Coverbs in Traditional Tiwi behave in a similar way to coverbs cross-linguistically. They cannot head a finite clause without an inflecting verb, although they can head non-finite clauses. In example (71), the coverb *kirliminjangini* ‘sleep’ functions as the predicational head of a non-finite clause; the whole clause is unmarked for tense or any other grammatical information that is ordinarily obligatory for finite clauses, although it does subcategorise an argument, satisfied here by *ngiya* ‘I’.

(71)  
\[\text{ngiya kirliminjangini, api parrumintangimparighi}\]  
\[\text{ngiya kirliminjangini} \quad \text{api} \quad \text{pi- rri- mini- angimpari -ighi}\]  
\[1\text{MIN} \quad \text{sleep} \quad \text{CONJ} \quad 3\text{AUGS- PST- 1MINO- wake -CAUS}\]  
‘I (was) asleep, and they woke me up’  

The free translation for this example implies that the non-finite clause *ngiya kirliminjangini* includes some tense information, which it does not. The tense is implied by the following finite clause. As such a better translation might be ‘me being asleep, they woke me up’.

25 Although coverbs in Wagiman can predicate a finite clause after having been verbalised through derivational morphology (A Wilson, 2006:14)
Coverbs are most often used in combination with an inflecting verb, producing a complex predicate (see §4.3.4). Complex predicates derive their lexical semantic content primarily from the coverb, with obligatory grammatical information such as tense, aspect and agreement morphology, contributed by the inflecting verb.

4.3 Syntax

Osborne’s (1974:58-80) account of Traditional Tiwi syntax concentrates on the order of syntactic constituents such as subject, object and the verb. He discusses the normative word order, and lists all permissible orders. He also discusses the formation of several sentential constructions including commands, questions and ‘periphrastic verb phrases’, which I take to be complex predicates.

The syntax of Traditional Tiwi is not a major focus of this thesis, and for more detail, the reader is directed to either Osborne (1974:58-80) or Lee (1987:221-315).

4.3.1 Word order

According to Osborne (1974:62-65), the basic constituent order in Traditional Tiwi is SV(O), although he notes that this basic word order is not fixed, and constituents can appear in several combinations. They are listed in Table 19.

| Table 19: Possible ordering of S, V and O in Traditional Tiwi (Osborne, 1974:63) |
|-----------------|-----------------|-----------------|
| SVO | Yirrikati yikirimi mampunga | Yirrikati made canoes |
| VOS | yikirimi mampunga Yirrikati | Yirrikati made canoes |
| OVS | mampunga yikirimi Yirrikati | Yirrikati made canoes |
| SV  | Yirrikati yikirimi       | Yirrikati made them |
| VO  | yikirimi mampunga         | He made canoes |
| OV  | mampunga yikirimi         | He made canoes |
| VS  | yikirimi Yirrikati        | Yirrikati made them |
| V   | yikirimi                   | He made them |

Osborne (1974:63) argues that other orderings, such as VSO and SOV are not permitted, however the last of these is represented in his own recordings:
As such, SOV can be included in the list of permissible word orders, meaning that the object is always adjacent to the verb. The phrase structure can therefore be generalised to the following basic rules. Note that assuming a verb phrase accounts for both the observed word orders and the absence of word orders such as VSO and OSV. If this is the correct analysis, then Traditional Tiwi is unusual for Australian languages in that most Australian languages do not exhibit a verb phrase.

\[
\text{(73)} \quad S \rightarrow \text{NP}_S, \text{VP} \\
\text{VP} \rightarrow \text{NP}_O, V
\]

Complex predicates (see §4.3.4) always have the order coverb–verb and are always adjacent. Again, assuming the presence of a verb phrase accounts for the observed structures. The phrase structure rules can therefore be modified as in (74).

\[
\text{(74)} \quad S \rightarrow \text{NP}_S, \text{VP} \\
\text{VP} \rightarrow \text{NP}_O, V' \\
V' \rightarrow (CV) + V
\]

As there is little further evidence for the presence of a verb phrase, these phrase structures are simply speculative. Stipulating a verb phrase correctly predicts the observed surface structures.

The structure of noun phrases is not within the scope of the present study, and will not be covered here. The reader is directed to Lee (1987:221-44) for a more complete picture as she describes noun phrases in detail.

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26 Although these rules do not take into account other word classes, such as particles, nor other types of phrasal projections including prepositional phrases.
4.3.2 Questions

There are two distinct ways of forming questions in Traditional Tiwi, which Osborne (1974:67-68) labels yes-no questions and k-questions. Lee (1987:290) labels these direct questions and information questions respectively.

Yes-no questions are marked by rising intonation, and by the optional interrogative enclitic =ana, which most often attaches to the final word in the sentence. Apart from this clitic and the rising intonation, yes-no questions are structurally no different from declarative statements.

(75)  
giminyipirni
yi- minyi- pirni
3MINS.M.PST- 2MINO- hit
‘he hit you’

(CO_707A: 01:02:25)

(75)  
giminyipirnana
yi- minyi- pirni =ana
3MINS.M.PST- 2MINO- hit =Q
‘did he hit you?’

(CO_708B: 00:26:24)

K-questions are marked by a similar rise in intonation, but they are not marked using the interrogative clitic -ana, instead they take one of the interrogative pronouns described in §4.2.2.2, or another interrogative word, such as maka ‘where’, awungarri ‘when’, awungana ‘how’ or kama ‘why’, which usually occurs in initial position (Lee, 1987:290). Osborne (1974:68) provides several examples, all reproduced below.

(76)  
kuwani ji- kuruwala
who.M 3MIN.M.PST- sing
‘who sang?’

(77)  
kamini nyi- mpi- timarnti
what.M 2MIN- NPST- want
‘what do you want?’

(78)  
maa kama nyi- mpi- wuja
where 2MIN- NPST- go
‘where are you going?’

K-questions are so named because most interrogative pronouns are k-initial, such as kama ‘why’.
Examples (76) through to (81) illustrate the k-words functioning in several different grammatical and semantic roles. They can function as subjects (76), objects (77) or paths (78), and as non-argument semantic roles, such as time (79), manner (80) and reason (81).

### 4.3.3 Imperatives

Osborne (1974:66-67) provides only a brief description of imperative verbs and Lee (1987:172-204) mentions imperative constructions only inasmuch as they interact with other phenomena, as they are not within the scope of her work.

Osborne (1974:66-67) argues that imperatives in which the addressee is 2nd person minimal are formed using a verbal prefix *ta-* , which appears to occur in place of the regular subject and tense prefixes that are ordinarily obligatory on verbs (see §5.1.1 and §5.2.1). These are exemplified by Osborne by examples (82) and (83).

(82) 
*tayakupawurli*  
ta- akupawurli  
IMP- go_back  
‘go back!’  
(Osborne, 1974:67)

(83)  
takirimi tutuni  
ta- kirimi  tutuni  
IMP- make  gravepost  
‘make graveposts!’  
(Osborne, 1974:67)

Examples from my corpus of transcribed recordings accord with this basic pattern, as shown in (84).
Where the subject has augmented number, the regular 2nd person prefix *nyi-* is retained, along with the *ta-* prefix. According to Osborne (1974:67) however, the *ta-* prefix is changed to *rra-*:

(85)  

*nyirrakupawurli*

*nyi- rra-* akupawurli

2AUG- IMP- return

‘you mob, go back!’ (Osborne, 1974:67)

(86)  

*nyirrakirimi tutuni*

*nyi- rra-* kirimi tutuni

2AUG- IMP- make gravepost

‘you mob, make graveposts!’ (Osborne, 1974:67)

Prohibitives, according to Osborne (1974:69) are formed using the prohibitive particle *ngajirri* which occurs immediately prior to the verb. He also notes that prohibitive inflected verbs are marked with ‘future incomplete’ mood, although it is unclear what he means by this.

In §5.2.3 I present a different analysis. I argue that there is a separate imperative morpheme *a-* which coalesces with the preceding morpheme and replaces its vowel, which, in combination with various tense and subject prefixes, creates surface forms such as those above, as well as the following.

(87)  

*ngajirri ngimpangintamwari*

ngajirri nyi- mpa- ngini- ta- umwari

PROH 2MINS- NPST- 1MINO.IRR- NEG- leave

‘don’t leave me here!’ (AW_20120411_03: 00:09:02)

(87), under my analysis, would be segmented and glossed as follows:

---

28 Both Osborne and Lee list the prohibitive particle as *ngajiti*, however in my data it is always *ngajirri*. The correspondence between *t* and *rr* is attested elsewhere. For example, the 3MIN basic free pronouns are *nyirra* and *ngarra* for feminine and masculine respectively, whereas the emphatic forms are *nyitawa* and *ngatawa*. Most other emphatic forms are phonologically related to the basic forms. See §4.2.2.1 for details.
(88)  
\[\text{ngajirri ngimpangintamwari}\]  
\[\text{PROH 2MIN- NPST- IMP- IMINO.IRR- NEG- leave}\]

‘don’t leave me here!’  

See §5.2.4 for further discussion.

4.3.4 Complex predicates

Osborne (1974:75) describes a phenomenon that he labels ‘periphrastic verb phrases’, which Lee (1987:203-05) labels ‘verbal complexes’. Given however, their similarity with constructions that have been identified in several languages in northern Australia (Amberber, et al., 2010; Schultze-Berndt, 2000; McGregor, 2002), the label ‘complex predicates’ (Butt, 2003:2) is more suitable. Complex predicates in Traditional Tiwi consist of a coverb, such as \(\text{yoyi} \) ‘dance’ or \(\text{mwaliki} \) ‘swim’, in combination with an inflecting verb. Moreover, the two elements always occur in that order (Osborne, 1974:75).

In this respect, Traditional Tiwi complex predicates bear close resemblance to those of Jaminjung and Wagiman, among others, in which the relatively fixed word order of complex predicates stands in contrast to the relatively free word order of syntactic constituents in other constructions (S Wilson, 1999:68; A Wilson, 2006:21; Schultze-Berndt, 2000:120). In both these languages, the most typical word order for a complex predicate is coverb–verb, accounting for more than 80% of complex predicates in Wagiman (S Wilson, 1999:68) and around 90% of complex predicates in Jaminjung (Schultze-Berndt, 2000:120).

Another cross-linguistically salient feature of complex predicates in Australian languages is that the inflecting verb element is typically restricted to a subset of the class of verbs that are semantically broad enough to allow combination with more semantically narrow coverbs, or otherwise, lose some of their semantic content and become ‘light verbs’ (Butt, 2003). In many languages that exhibit complex predicates, verbs are a closed class that is usually relatively small in comparison to the non-inflecting element (the coverb). In Jaminjung for example, there are only around 30 inflecting verbs (Schultze-Berndt, 2000:83) and in Wagiman only 45

---

(A Wilson, 2006:9) and in both languages, verbs are a closed class. The verbs that are attested in complex predicates are an even smaller subset of this small class. In Traditional Tiwi, while the class of inflecting verbs is large and may have been an open class, the verbs that occur in complex predicates are from a very restricted set.

Osborne (1974:75) claims that the inflecting verb in a complex predicate must be one of four verbs, -mi, -ma, -pi or -kirimi, all of which are treated as generic auxiliaries and glossed as ‘do’. The selection of which inflecting verb to use in combination with which coverb is, in Osborne’s opinion, arbitrary and cannot be ascertained from the coverb’s form or meaning. Several complex predicates are exemplified in (89) through to (93) below, with the coverb and the inflecting verb stem highlighted in bold.

(89)  
\[ \text{wuta mwaliki wuwunjingimi} \]  
\[ \text{wuta mwaliki wu-wunjingu-mi} \]  
\[ \text{3AUG swim 3AUG.NPST-DUR-do} \]  
‘they are swimming’ (CO_707B: 00:32:06)

(90)  
\[ \text{muwa yoyi marruwaturumi} \]  
\[ \text{muwa yoyi mu-rrri-watu-mi} \]  
\[ \text{1/2MIN dance 1/2MIN-PST-MORN-do} \]  
‘you and me danced in the morning’ (CO_708A: 00:29:57)

(91)  
\[ \text{mitaya yima} \]  
\[ \text{mitaya yi-ma} \]  
\[ \text{steal 3MIN.M.PST-do} \]  
‘he stole it’ (CO_699A: 00:23:03)

(92)  
\[ \text{kaparli yi-kirimi} \]  
\[ \text{miss 3MIN.M.PST-do} \]  
‘he missed’ (Lee, 1987:204)

(93)  
\[ \text{ngu-wujingi-pirni api karluwu pirliki} \]  
\[ \text{a-ta-pi} \]  
\[ \text{1MINS.NPST-DUR-hit CONJ NEG cry 3MINS.M.NPST-NEG-do} \]  
‘I keep hitting him but he doesn’t cry’ (Lee, 1993:236)

There are, however, examples of coverbs combining with inflecting verbs that are not among the four auxiliaries listed by Osborne, as in (94). There are also examples of nominals and inflecting verbs combining in similar ways (95).\(^{30}\)

\(^{30}\) It is possible that jikipurti ‘cough’ is a coverb rather than a nominal, although its phonological shape is consistent with it being a nominal, as it has a regular masculine nominal ending -ti (see §4.2.1).
It is possible that inflecting verbs, when part of a complex predicate, function as ‘light verbs’ (Jespersen, 1965; Butt, 2003) that have been semantically bleached such that they do not necessarily mean what they do when they predicate an entire clause themselves without a coverb. The inflecting verbs in (94) and (95), muwu ‘sit’ and pirni ‘hit’ respectively, could be contributing information such as durativity or punctuality to the clause respectively. In this case, they behave similarly with the semantic contribution of inflecting verbs in other languages that exhibit complex predicates. In Wagiman for example, the verb ya ‘go’, when in a complex predicate, has a durative meaning, as in (96), in which the complex predicate comprising dabulp ‘smoke’ and ya ‘go’ means ‘to smoke lots/habitually’.

Similarly in Jamingjung, generic verbs (as Schultze-Berndt labels them) encode some semantic content, leading Schultze-Berndt to regard them as having a classifying function (2000:211), although they have “a low degree of grammaticalisation, and a high degree of semantic transparency” (2000:214). As such she does not consider them to be verb classifiers to the same grammaticalised extent as exhibited by other northern Australian languages such as the Daly languages, including Ngan'gityemerri (Reid, 1990), Murrinh-Patha (M Walsh, 1996), and Nyulnyulan languages such as Bardi (Bowern, 2012) and Gooniyandi (McGregor, 2002, 1990).

In Traditional Tiwi there is only minimal semantic contribution from the inflecting verb, leading Osborne to refer to them as auxiliaries (1974:75).
Complex predicates, Lee (1987:203) argues, represent the main syntactic difference between Traditional and Modern Tiwi. While Traditional Tiwi only has a small closed class of coverbs that are available for complex predicate formation, they also only have a small set of auxiliary verbs with which they combine. Modern Tiwi by contrast, utilises complex predication as the main clausal syntactic construction in the language, with coverbs either taken straight from Traditional Tiwi coverbs, as in (97), or borrowed from other languages such as Kriol, (98). At least one Modern Tiwi coverb, exemplified in (99), is derived from a Traditional Tiwi inflecting verb that has been reanalysed on the basis of its imperative form.\(^{31}\) The only inflecting verb that can function in combination with coverbs in Modern Tiwi is \(mi\) ‘do’, and as the examples (97) through to (99) show, this verb can occur in both intransitive and transitive clauses, and appears to contribute little, if any, semantic content.\(^{32}\)

\[(97)\]  
Modern Tiwi:  
\[
\text{awa mwaliki yi- nti- ri- mi} \\
1\text{PL swim 1PL-PST-CV-do}
\]
‘we swam’ \hspace{1cm} (Lee, 1987:206)

\[(98)\]  
Modern Tiwi:  
\[
\text{shutim ji- mi yiya ka yikara} \\
\text{shoot 3SG.F.PST-do 1SG PREP hand}
\]
‘she shot me in the hand’ \hspace{1cm} (Lee, 1987:206)

\[(99)\]  
Modern Tiwi:  
\[
\text{tamu ji- mi} \\
\text{sit 3SG.F.PST-do}
\]
‘she sat’ \hspace{1cm} (Lee, 1987:207)

As such, these constructions in Modern Tiwi are best analysed as auxiliary verb constructions in that the inflecting verb contributes no semantic information and must occur with a lexical verb which does not inflect, but does contribute semantic information.

Complex predication is not within the scope of this thesis and will not be discussed in detail. It remains however, an area of Traditional Tiwi syntax that deserves more attention.

\[^{31}\] Tamu is a reanalysis of the 2nd person minimal imperative form of the inflecting verb \(muwu\) ‘sit’, \(jamuwu\), which is pronounced [tamu], as the laminal stop is realised as a lamino-dental before a.

\[^{32}\] A difference between Traditional Tiwi and Modern Tiwi is that while the former has a minimal/augmented number system (see §4.2.2.1), the latter has a singular/plural system, as shown by these examples.
This chapter has revealed a number of interesting aspects of Tiwi grammar that have not yet been fully described. The morphological structure of inflecting verbs is one of the more notable gaps in the current knowledge, however there are gaps in the knowledge at every level of the language.

The next chapter will specifically focus on inflecting verbs in Traditional Tiwi, and will describe in detail each affix position, its members, and their functions. It shows that there are very interesting phenomena occurring within the agreement system and in the incorporation of nominal and verbal elements into the verb. Subsequent chapters will focus specifically on those phenomena.
Chapter 4 provided an overview of Traditional Tiwi grammar as presented by Osborne (1974) and Lee (1987). It demonstrates that there are several limitations in the description of verb morphology in particular and that these areas should be reconsidered.

The first main area that needs further description is the verb agreement system. As shown in §4.2.3.1, agreement morphology presents several challenges to a complete description of Tiwi. Subjects and tense markers are not easily segmented from each other, and objects of certain types cause subject and tense markers to behave in seemingly unsystematic ways. Incorporation, the insertion of lexical elements into inflecting verbs, is another area in which the current descriptions are limited. Traditional Tiwi exhibits incorporation of both nominal and verbal lexical elements into inflecting verbs. Incorporated elements can be associated with, or predicated of, a variety of arguments marked on the verb. Incorporation also shows interaction with pronominal agreement.
As shown in chapter 4, the Traditional Tiwi inflecting verb is a particularly complex and interesting aspect of Tiwi grammar, and one that warrants further analysis, especially since the previous descriptions did not provide an adequate analysis of the morphological behaviour of Tiwi inflecting verbs.

In chapter 6 I present a new analysis of agreement morphology that radically simplifies the pronominal system and explains the odd behaviour of pronouns, and in chapter 7 I present and discuss the various phenomena relating to incorporation. First however, this chapter describes the Traditional Tiwi inflecting verb in detail. Each of the 14 prefixes and 4 suffixes is introduced, discussed and exemplified with examples from the corpus.

Osborne (1974:36-50) identifies some 18 morpheme slots in the verb, although in practice, the largest Tiwi verb would only contain around five or six. Examples (100) through to (103) exemplify some morphologically rich verb forms.

(100)  
wakwakini yuwatumingilimpangiparighi
wakwakini yi- watu- mini- ungirlimpangi- angimpari-amighi
crow 3MINS.M.PST- MORN- 1MINO- sleep- wake -CAUS
‘the crow woke me up in the morning’ (AW_20120413_03:00:18:35)

(101)  
yiminimajinkiliyakupawurlamighi
yi- mini- maji- inkili- akupawurli- amighi
3MINS.M.PST- 1MINO- COM- vehicle- return -CAUS
‘he took me back by car’
(lit. ‘he took me back with a vehicle’) (AW_20120411_02:00:32:36)

(102)  
yuwiniwatumingilimpanginiwirri
yi- wuni- watu- mini- ungirlipangi- pangini- wirri
3MINS.M.PST- HITH- morn- 1MINO- sleep- meat- bite
‘he came here in the morning and bit my meat’
(Capell, 1967:47)

(103)  
ampiniwatuwyjingimajirranirningiyangurlimayami
a- mpi- ni- watu- wujingu- maji- rukirningi- angurlimayi- ami
3MINS.F- NPST- LOC- morn- DUR- COM- light- walk -IPFV
‘she is walking over there in the morning with a light’
(Lee, 1987:2)

The positions of these categories relative to the stem are given below in Tables 20 and 21.
This chapter discusses each of these verbal positions and illustrates their use with examples from the corpus. Due to the fact that several categories are distributed across multiple verbal positions, for example the morning and evening markers *watu-* and *ki-* occur in positions –10 and –6 respectively, yet clearly constitute a single temporal category, this chapter is organised by categories rather than by verbal positions. §5.1 looks at the agreement affixes; §5.2 at tense, aspect, mood and polarity; §5.3 at location, direction, time and motion; §5.4 at incorporation; and §5.5 looks at verbal derivations.

### 5.1 Agreement

The Traditional Tiwi inflecting verb obligatorily agrees for subject and, if licensed by the verb, object. An oblique argument can also be marked, although due to the fact that both oblique and object are encoded using the same morpheme position, –9, they cannot both occur on the same inflecting verb. Subject occupies position –14, the left-most verbal slot.

The reduced template in Table 22 shows the relative positions of these morphemes with respect to the stem.

### Table 22: Reduced template of agreement affixes

<table>
<thead>
<tr>
<th></th>
<th>-14</th>
<th>-9</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subject</td>
<td>Object/Oblique</td>
<td>Stem</td>
</tr>
</tbody>
</table>
5.1.1 Subject

The subject is the sole argument subcategorised for by an intransitive verb, and the agent of a transitive verb. As discussed in §4.2.3.1, Osborne (1974:38) considers the subject and tense markers as portmanteau morphemes that cannot be segmented, an analysis which Lee (1987:172) follows. As I argue here however, these two categories can be segmented into separate morphemes, although they do interact and produce interesting phenomena (see chapter 6).

Traditional Tiwi exhibits a minimal/augmented pronominal system, which almost always shows the same distinctions for person and number across independent pronouns, and bound pronouns; subject, object and oblique. The forms of the subject agreement markers are as shown in Table 23.

Table 23: Basic forms of the subject pronouns

<table>
<thead>
<tr>
<th>Number</th>
<th>Person</th>
<th>Class</th>
<th>Tense</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>NPST</td>
</tr>
<tr>
<td>MIN</td>
<td>1</td>
<td>A</td>
<td>ngi-</td>
</tr>
<tr>
<td></td>
<td>1/2</td>
<td>A</td>
<td>mu-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>B</td>
<td>nyi-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>M</td>
<td>a-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>a-</td>
</tr>
<tr>
<td>AUG</td>
<td>1</td>
<td>B</td>
<td>ngi-</td>
</tr>
<tr>
<td></td>
<td>1/2</td>
<td>A</td>
<td>nga-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>B</td>
<td>nyi-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>A</td>
<td>wu-</td>
</tr>
</tbody>
</table>

Some pronouns take a different base form in past tense verbs while others remain constant irrespective of the tense of the verb. Table 23 contains a cell for each form of a subject that differs with respect to tense.

Osborne (1974:38) gives the form ngi- for the basic 2nd person augmented subject pronoun, but only for the ‘general’ form, that is, when it is used intransitively, or when the object is not 3MIN. Elsewhere, that is, when used in a transitive verb in which the object is 3rd person

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33 There is the single inconsistency in the free pronouns in that the emphatic form ngawila is syncretic for both 1AUG and 1/2AUG.
minimal, Osborne lists the pronoun as *nyi*- instead. Lee (1987:173; 1993:377-78) follows Osborne closely on this.

However, examples throughout the recorded corpus, some of which are reproduced below, clearly indicate that the 2nd person augmented subject pronoun is always *nyi*- and therefore that all 2nd person pronouns are identical. Some examples from the corpus demonstrating this are given below.

(104)  *nuwa nyintirimuwu*

nuwa  *nyi- nti- ri- nuwu*
2AUG  2AUG- PST- ?- sit
‘you (pl) sat down’  (CO_700B: 00:21:35)

(105)  *nuwa nyintipakupawurli*

nuwa  *nyi- nti- pakupawurli*
2AUG  2AUG- PST- return
‘you (pl) went back’  (CO_700B: 00:28:34)

(106)  *nuwa nyimiripirni*

nuwa  *nyi- mpi- rirni*
2AUG  2AUGS- NPST(OF): ?- hit
‘you (pl) are going to hit her’  (CO_707A: 00:41:15)

While there are also examples that seem to suggest a velar nasal rather than palatal for this pronoun, the quality of the recordings is not sufficient to determine this beyond doubt. Other examples suggest that the form of the pronoun with a velar nasal occurs in error. For example, Osborne’s interviewee initially provided (107a), but within 30 seconds, had corrected the form of the pronoun with (107b).

(107a)  *nuwa ngampumuwunipirni*

nuwa  *ngi- mpi- muwuni- pirni*
2AUG  ??- NPST- 1AUGO- hit
‘you are going to hit us’  (CO_707A: 00:41:37)

(107b)  *nyimpud-, nyimpunguwunipirni*

*nyi- mpi- nguwuni- pirni*
2AUGS- NPST- 1AUGO.IRR- hit
‘you are going to hit us’  (CO_707A: 00:42:02)

The one exception is the 2nd person minimal past tense portmanteau form *ji*, however as shown in §5.1.1, when the verb marks a 3min object, the portmanteau form is not used, and *ngi* is used instead. This underscores the point being made here, that all 2nd person bound pronouns have the same form.
Given that in the majority of cases the form of the 2nd person augmented pronoun has an audible palatal nasal onset, and that the paradigm is made much more regular, I am treating the 2nd person bound pronouns as *nyi-* in all forms, apart from the suppletive 2nd person minimal past tense form *ji*.

### 5.1.2 Object and Oblique

In addition to subjects, Tiwi verbs mark objects and obliques (if they are subcategorised for by the verb). As with subject bound pronouns, the objects and obliques mark person and number in a minimal/augmented system, and gender for 3rd person minimal. In addition, the object and oblique bound pronouns also encode realis/irrealis. The forms are given in Table 24.

<table>
<thead>
<tr>
<th>Person</th>
<th>Object</th>
<th>Oblique</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Realis</td>
<td>Irrealis</td>
</tr>
<tr>
<td>1MIN</td>
<td>mini-</td>
<td>ngini-</td>
</tr>
<tr>
<td>1/2MIN</td>
<td>mani-</td>
<td>ngani-</td>
</tr>
<tr>
<td>2MIN</td>
<td>minyi-</td>
<td>nginyi-</td>
</tr>
<tr>
<td>3MIN</td>
<td>M</td>
<td>ø-</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>1AUG</td>
<td>muwuni-</td>
<td>nguwuni-</td>
</tr>
<tr>
<td>1/2AUG</td>
<td>mani-</td>
<td>ngani-</td>
</tr>
<tr>
<td>2AUG</td>
<td>mani-</td>
<td>ngani-</td>
</tr>
<tr>
<td>3AUG</td>
<td>wuni-</td>
<td>ripi-</td>
</tr>
</tbody>
</table>

(108)  *yiminikiripirnani*

yi- mini- kiri- pirni -ani

3MINS.M.PST- 1MINO- hand- hit -ITER

‘he kept hitting me on the hand’ (AW_20120315_01: 00:09:57)

(109)  *nguminyjumwarami*

ngu- minyi- unwari -ani

1MINS.NPST- 2MINO- leave -IPFV

‘I’m leaving you’ (AW_20120411_03: 00:05:40)

(109)  *ngumpuwunjungumimirgingarra*

ngi- mpi- wunjingu- mi- miringarra

1AUGS- NPST- DUR- 3MINOBL.M- sit

‘we’re sitting on him’ (AW_20120410_01: 00:34:16)
Both Osborne (1974:27) and Lee (1987:180) analyse the *ŋ*-initial forms of the object and oblique bound pronouns as morphophonological variants of the *m*-initial forms, rather than taking the two variant forms as marking reality status. Osborne claims that the morphophonological conditioning is due to the presence of particular morphemes:

The initial *m* of those object prefixes which begin with this phoneme is changed to *ŋ* following *pa*- (*mpi*), ‘non-past’, or *ma*-, ‘subjunctive’.

Lee (1987:180) follows Osborne almost exactly, although she adds the frustrative prefix *wa*- to the list of morphemes that trigger this alternation.

In general, the initial *m* becomes *ŋ* following the tense prefix *mpi*-*, the frustrative prefix (*w)a*-, and the subjunctive prefix *ma*-. The following examples are used to illustrate this change:35

(110) pu- ma- *ŋa*ni- pirn =ana  
     3AUGS.PST- IRR- 1AUGO.IRR- hit =Q  
     ‘are they going to hit us?’  
     (Osborne, 1974:27)

(111) karluwu yi- ma- *nga*n- takirayi kunawuni  
     NEG 3MIN.S.M.PST- IRR- 1/2AUGO.IRR- give money  
     ‘he won’t give us any money’  
     (Lee, 1987:181)

(112) pwakayini ngi- ntu- *wa*- ngirri- ma  
     play 1AUGS- PST- FRUST- 3MINOB.F.IRR- do  
     ‘we tried to play with her (but with no success)’  
     (Lee, 1987:181)

This analysis, that a morphophonemic change is triggered by the presence of particular morphemes, which do not form a natural class, rather than by the phonological environment, is not plausible. Furthermore, both Lee and Osborne failed to see that the common factor in each of the examples in which this change occurs, is their reality status. Each of the examples produced to exemplify this, such as (110) through to (112) above, are irrealis forms of the verb.

The use of an *ŋ*-initial object or oblique pronoun can also be sufficient to indicate negative polarity, as in the following minimal pair:36

---

35 The glosses in these examples reflect my own analysis rather than those of Osborne or Lee.
Other times, the *ng*-initial form of the object or oblique pronoun occurs with an irrealis prefix from slot –11. Sentence (114) is an irrealis clause, although it is not a negative one. In (115) furthermore, while the verb does not take an irrealis marker, it is marked periphrastically for irrealis by the particle *arramukuta* ‘maybe’.

(114) *pulangumwani yuwanginiwirri*
pulangumwani yi- *wa- ngini-* wirri
dog 3MINS.M.PST- **FRUST**- 1MINO.IRR- bite
‘the dog is going to try and bite me’ (CO_707B: 00:17:51)

(115) *pulangumwani ampunukura arramukuta*
pulangumwani a- mpi- **ni-** kura   **arramukuta**
dog 3MINS.F.- NPST- 3MINOBL.M.IRR- die **maybe**
‘that dog might die’ (AW_20120301_02: 00:02:43)

As such, the *ng*-forms of the object and oblique pronouns (or the *n*-form in some cases, including (115)), clearly mark irrealis mood rather than just negative polarity.

In addition to irrealis mood markers such as the frustrative *wa-* and the general irrealis marker *ma-* , both Osborne and Lee consider the non-past tense marker *mpi-* to similarly condition the use of *ng*-initial object and oblique agreement markers (Osborne, 1974:27; Lee, 1987:180). The corpus data is not consistent with this analysis. There are many examples from the corpus, including in Osborne’s own recordings, that demonstrate that *mpi-* may collocate with *m*-initial object/oblique markers, and therefore, that *mpi-* does not condition the change from *m*- to *ng*- . Under Osborne and Lee’s analysis, the object markers in (116) through to (118) are all predicted to be *ng*-initial.

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36 The free translations here reflect the stimulus. It is not known whether (113b) could be interpreted as ‘I might (have) hit you’, although examples such as (173) in §5.2.4 suggest that this meaning would require the addition of the subjunctive prefix *ma-*.
I argue, on the basis of the facts laid out above, that the m-initial forms of the object and oblique pronouns encode realsis, while the ng-initial forms (and some n-initial forms) encode irrealis, and that their forms are not morphophonemically conditioned.

A possible alternative analysis of these pronouns is that the marking of reality status is independent of the pronoun, and constitutes its own morpheme slot, with m- ‘realsis’ and ng- ‘irrealsis’. There are at least two problems with this analysis. Firstly, there are several object/oblique pronouns that do not behave as would be predicted if reality status were a distinct morpheme. Wun- 3AUG takes neither m- or ng-, and 3MIN.MOBL both take n- in irrealis forms rather than the predicted ng-. Secondly, reality status marking in this hypothesised slot does not occur without overt object or oblique pronouns, highlighting the fact that reality status is fused with them. While diachronically this object/oblique pronominal system may have been distinct from a reality status marker, synchronically the two categories are fused in Traditional Tiwi.

Table 24 also shows that 3rd person minimal objects have no overt morphological representation; they are zero morphs. Transitive verbs that do not take an overt object are thus taken to have a 3MIN object. The gender of the object, however, is encoded by the choice of tense marker. As shown in the next section, there are two classes of tense markers whose gender agreement function emerges only when there is a covert object; a 3MIN object.

The non-past tense marker ø- corresponds to a masculine object while mpi- corresponds to a feminine object, as shown in examples (119) and (120).
The interaction between subject and object agreement and tense in Traditional Tiwi is complex. I return to this in chapter 6 and provide a full account of the interesting morphological phenomena that result from this interaction.

### 5.2 Tense, Aspect, Mood and Polarity

As with many verbal categories, tense, aspect, mood and polarity are distributed across several verbal slots. Tense occurs in slot –13, immediately after the subject pronouns, although as shown in this section and further elaborated in chapter 6, the tense markers have other functions as well. Aspect is marked in several positions: durative *wanjinga-* and inceptive *wi-* occur in position –8, and iterative suffixes *-mini* and *-ani* occur in position +3. Furthermore, an associated motion suffix *-mami* in verb slot +2 (discussed in §5.3.3) also encodes imperfective aspect in some instances. Mood also has several exponents: position –11 marks various types of irrealis mood: subjunctive *ma-*, frustrative *wa-*, obligative *wa-* and imperative *a-*, and irrealis mood is also marked on object and oblique agreement prefixes in position –9 (as discussed above in §5.1.2). Polarity finally, is marked in position –5, although its status is not entirely clear.

The reduced template in Table 25 shows the relative positions of the affixes discussed in this section.

<table>
<thead>
<tr>
<th>Slot</th>
<th>Tense</th>
<th>Mood</th>
<th>Aspect</th>
<th>Polarity</th>
<th>Stem</th>
<th>Motion</th>
<th>Aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>–13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 25: Reduced template of TAMP affixes
5.2.1 Tense

All inflecting verbs are obligatorily marked for tense, of which there are two; non-past and past. For some subjects, the past tense is expressed as a suppletive form of the subject marker – it is fused with tense – in which case there is no overt realisation of this category. There are two classes of tense markers as shown in Table 26.

Table 26: Traditional Tiwi tense markers

<table>
<thead>
<tr>
<th>Class A</th>
<th>Class B</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPST</td>
<td>ø-</td>
</tr>
<tr>
<td>PST</td>
<td>rri-</td>
</tr>
</tbody>
</table>

These tense marker classes correspond to two independent functions: the class membership of the pronoun, and the gender of an object, if one is present. Each bound pronoun is a member of either class A or B (as listed in Table 27), and the class of the bound pronoun determines which class of tense marker is used. In other words, and following Corbett (2006) with respect to terminology, there is agreement within the inflecting verb, between the subject and tense, such that the subject bound pronoun is the controller and the tense marker is the target. The feature for which they agree is class.

The complete paradigm of subject and tense markers, showing which bound pronouns belong to which class, and therefore which tense marker is associated with it, is given in Table 27.

Table 27: Traditional Tiwi subject/tense markers

<table>
<thead>
<tr>
<th>number</th>
<th>number</th>
<th>class</th>
<th>tense</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN</td>
<td>1</td>
<td>A</td>
<td>ngi-o- ngi-rrri-</td>
</tr>
<tr>
<td></td>
<td>1/2</td>
<td>A</td>
<td>mu-o-  mu-rrri-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>B</td>
<td>nyi-mpi- ji-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>M</td>
<td>a-o-  yi-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>a-mpi- ji-</td>
</tr>
<tr>
<td>AUG</td>
<td>1</td>
<td>B</td>
<td>ngi-mpi- ngi-nti-</td>
</tr>
<tr>
<td></td>
<td>1/2</td>
<td>A</td>
<td>nga-o- nga-rrri-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>B</td>
<td>nyi-mpi- nyi-nti-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>A</td>
<td>wu-o-  pi-rrri-</td>
</tr>
</tbody>
</table>

The tense marker chosen is therefore determined by the class of the subject bound pronoun. For example, 1st person minimal subject is class A, and therefore takes class A tense markers.
ø- and rri-, and 1st person augmented subject is class B and takes class B tense markers mpi- and nti-.

(121) ngiya ngujujingapa
ngiya  ngi- ø- wunjingu- apa
1MIN 1MIN- NPST(A)- DUR- eat
‘I am eating’ (CO_707A: 00:13:13)

(122) ngiya ngurruwapa awurlagha
ngiya  ngi- rri- apa  awurlagha
1MIN 1MIN- PST(A)- eat  yesterday
‘I ate yesterday’ (CO_707A: 00:17:01)

(123) ngagha nguumpuwujingapa
ngagha  ngi- mpi- wunjingu- apa
1AUG 1AUG- NPST(B)- DUR- eat
‘we are eating’ (CO_707A: 00:15:25)

(124) ngagha nguntuwapa awurlagha
ngagha  ngi- nti- apa  awurlagha
1AUG 1AUG- PST(B)- eat  yesterday
‘we ate yesterday’ (CO_707A: 00:19:31)

The presence of an overt object does not affect the choice of tense class.

(125) ngiya nguminyipirni
ngiya  ngi- ø- minyi- pirni
1MIN 1MIN- NPST(A)- 2MINO- hit
‘I’m going to hit you’ (CO_707A: 00:28:57)

(126) ngurruminyjapunya
ngi- rri- minyi- papunya
1MIN- PST(A)- 2MINO- follow
‘I followed you’ (CO_700B: 00:29:25)

(119) ngagha ngimpuwunipirni
ngagha  ngi- mpi- wuni- pirni
1AUG 1AUGS- NPST(B)- 3AUGO- hit
‘we are going to hit them’ (CO_707A: 00:45:44)

(120) ngagha nguntuwuntapunya
ngagha  ngi- nti- wuni- papunya
1AUG 1AUGS- PST(B)- 3AUGO- follow
‘we followed them’ (CO_700B: 00:37:54)
For 3rd person minimal, 2nd person minimal, and 3rd person augmented, a suppletive form of the subject is used in the past tense. Apart from the 3rd person augmented, which still takes a tense marker, these suppletive forms block the overt realisation of a tense marker. Past tense forms of these subjects are illustrated below.

(127)  
\[
\text{Jimintakinya} \\
\text{ji- mini- akinyya} \\
\text{2MINS.PST- 1MINO- steal} \\
\text{‘you stole it from me’} \\
\text{(AW_20120307_01: 00:01:58)}
\]

(128)  
\[
\text{Yipakupuraji} \\
\text{yi- pakupuraji} \\
\text{3MINS.M.PST- fall} \\
\text{‘he fell’} \\
\text{(AW_20120411_01: 00:38:41)}
\]

(129)  
\[
\text{Jipangimpari} \\
\text{ji- pangipari} \\
\text{3MINS.F.PST- wake} \\
\text{‘she woke up’} \\
\text{(AW_20120307_01: 00:01:15)}
\]

(130)  
\[
\text{Purrawunjiiyamirnangilani wutiyati} \\
\text{pi- rri- wunjingu- amirnangili-ani wuta- yati} \\
\text{3AUGS(PST)- PST- DUR- play-ITER 3AUG- COOP} \\
\text{‘they were playing together’} \\
\text{(AW_20120307_01: 00:03:09)}
\]

Osborne’s claim that subjects and tense markers cannot be separated is not substantiated. However as the data above implies, the situation is still very complex. It is even more complex when taking into account morphological interference, such as the use of the tense markers to encode objects, a phenomenon I refer to as ‘Agreement Shift’ (see §6.2.2). Moreover, Tiwi verbs exhibits some lexicalised agreement, wherein some verbs lexically specify some features of their arguments. There is a class of around 30 verb stems, which Osborne (1974:29) and Lee (1987:157) label ‘feminine verb stems’, that are always inflected for a 3rd person minimal feminine object, irrespective of whether or not any such object exists. This class includes -pumuti ‘light (a fire)’ and -kuruwala ‘sing’.

(131)  
\[
\text{Ngi- nti- pumuti yikwani} \\
\text{1MINS- PST(O:F)- light fire(M)} \\
\text{‘I lit the fire’} \\
\text{(Lee, 1987:157)}
\]
Lexicalised agreement also occurs in Mawng (Singer, 2006). In chapter 6 I present a fuller discussion of lexicalised agreement, and a comparison of the phenomena in both Mawng and Traditional Tiwi.

### 5.2.2 Aspect

There are several morphemes that mark certain aspectual distinctions in Traditional Tiwi. They include the prefixes *wunjingu-* durative and *wi-* inceptive, the suffixes -*ani* and -*mini* which both encode iterative aspect, and -*mami* which prototypically encodes associated motion (to do something while moving about), but which also encodes imperfective aspect. These aspectual affixes are distributed across several verbal slots.

Position –8 contains the optional durative marker *wunjingu-*, which indicates that the event takes place over an extended period. The aspect *wunjingu-* can occur with any time reference, as long as the event can be interpreted as taking place over a continuous period of time. This prefix has a number of surface realisations depending on vocalic assimilation and syllabic reduction, but also due to free variation, such as the prenasalisation of the *j*. Some of its surface forms are *wuji-* , *jingi-* and simply *wun-*.

(133)  

\[ \text{ngiya ngumpuwunjunyunki ngiya punayinga} \]  
\[ \text{ngiya ngi- mpi- wunjingu- unyunkwi ngiya punayinga} \]  
\[ 1\text{MIN 1MINS- NPST(O:F)- DUR- wait 1MIN wife} \]  
\[ 'I'm waiting for my wife' \]  
\[ (\text{AW}_20120413_01: 00:42:19) \]

(134)  

\[ \text{yiminijingupiraghamini} \]  
\[ \text{yi- mini- wunjingu- piragha -mini} \]  
\[ 3\text{MINS.M.PST- 1MINO- DUR- smash_on_ground -ITER} \]  
\[ 'he was smashing me over and over' \]  
\[ \text{translated as 'still going around killing me'}^{37} \]  
\[ (\text{AW}_20120315_01: 00:15:18) \]

The durative prefix is very commonly marked on verbs that refer to present time-reference. Verbs with present time-reference that do not take the *wunjingu-* prefix are interpreted as
having a habitual meaning. Compare example (135), which is marked with the durative and is non-past, with (136), which does not. It may be possible that non-past marked verbs without wunjingu- can encode other aspectual distinctions, such as punctual, but there is no data to support this.

(135) ngiya nguwujingapa
    ngiya ngi- wunjingu- apa
    1MIN 1MIN.NPST- DUR- eat
    ‘I am eating’

(136) nguwatatipangapa
    ngi- watu- walipa- apa
    1MIN.NPST- MORN- meat- eat
    ‘I eat in the mornings’

Osborne (1974:42) also claims that verbal position –8 contains a marker wi-, that encodes the inception of events. There are not many examples of the inceptive in the corpus; Osborne collected several parallel examples, with different persons, one of which is given below. Lee (1987:190-91) provides several more examples, including (138).

(137) ampiwimangapakami
    a- mpi- wi- mangapa -mami
    3MIN.F- NPST- INCEP- drink -IPFV
    ‘she’s just beginning to drink’

(138) tuwawanga ngi- ntu- wi- janguralimayi
    again 1AUG- PST- INCEP- walk
    ‘we started walking again’

The inceptive wi- can occur in either tense, just as the durative wunjingu- can, however due to a paucity of empirical data, no more about its semantics or distribution is known.

Position +3 contains the markers -ani and -mini. Osborne describes them both as repetitive (iterative) markers, but provides no explanation of any difference between them (1974:42). Lee appears to follow this, listing only the form -ani and describing it as “past habitual” or ‘past repetitive” (1987:189). While these suffixes aren’t rare in the current corpus, there are no examples that show any contrast between -ani and -mini. I gloss both as iterative.

37 ‘To kill’ in the Aboriginal English sense means ‘to hit’.
(139)  *giminikiripirnani pwamunga pwamunga*
yi- mini- kiri- pirni -ani  pwamunga pwamunga
3MINS.M.PST- 1MINO- hand- hit -ITER  pound  pound
‘he pounded me on the hand over and over’  (AW_20120315_01: 00:09:57)

(140)  *giminimilipiraghamini*
yi- mini- mili- piragha -mini
3MINS.M.PST- 1MINO- foot- smash -ITER
‘he smashed my foot over and over’  (AW_20120315_01: 00:18:56)

(141)  *yuwunikuratighamini*
yi- wuni- kuratigha -mini
3MINS.M- 3AUGO- kill -ITER
‘he killed them one by one’  (AW_20120319_01: 00:16:28)

The iterative marker -mini furthermore can co-occur with the durative prefix *wujinga-* although the precise meaning of this combination is not clear from the examples.

(141)  *giminijungupiraghamini*
yi- mini- *wunjingu-* piragha -mini
3MINS.M.PST- 1MINO- DUR- smash- ITER
‘he was smashing me over and over’  
*translated as ‘still going around killing me’*
  (AW_20120315_01: 00:15:18)

(141) was translated into English as ‘he was still going around killing (hitting) me’, which suggests that -mini could contain a component of duration. If -mini does simply encode iterativity however, then its combination with the durative is unproblematic.

Another verbal position, slot +2, contains a suffix that can have an aspectual function. The suffix -*mami* is analysed by both Osborne and Lee as referring to events in which there is some movement, such as in (142). Other examples, however, show that -mami can encode imperfective aspect. In (143) and (144), the event described by the verb is taken to be occurring gradually, without necessarily reaching the endpoint.

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38 The verb stem *kuratigha* is not found elsewhere in the corpus and is not listed in the dictionary (Lee, 1993). It could be morphologically complex, being built on the verb *kura ‘die’,* and a derivational suffix *-tigha* which is otherwise unknown, although it resembles the causative *-amighi.* It has also been seen occurring on the verb *abapawurlu ‘return/go back’,* and has a similar causative meaning. Due to a lack of data beyond these two examples, its status remains unclear.
5.2.3 Polarity

Polarity is generally marked syntactically by the use of negative particles, such as *arnunkwa* and *karluwu*, which differ in that the former can be bound to a preceding pronoun, and is indigenous to Tiwi whereas the latter is borrowed from Iwaidja (Lee, 1987:136) and can only function as an independent word. These are exemplified below.

(145)  
*arnunkwa ngunitapa*

Arnunkwa ngi- ni- ta- apa  
NEG 1MIN- LOC- NEG- eat  
‘I haven’t eaten’  
(AW_20120413_01: 00:13:55)

(146)  
*ngiyarnunkwa ngutakuwani yilati*

Ngiya -arnunkwa ngi- ta- kuwa- ini yilati  
NEG -NEG 1MIN- NEG- knife- have knife  
‘I don’t have a knife’  
(AW_20120411_01: 00:25:24)

(147)  
*karluwu yimangintapirni*

Karluwu yi- ma- ngini- ta- pirni  
NEG 3MIN.S.M.PST- IRR- 1MINO- NEG- hit  
‘he’s not going to hit me’  
(CO_708B: 00:45:18)

In addition to these negative particles, and often in place of them, verbs are marked morphologically with a negative prefix *ta-*, exhibited by each of the above.
Osborne does not list a negative polarity affix. However he does describe what I believe is the same morphological form, but conflates it with another, entirely unrelated morpheme. Osborne (1974:28) identifies an affix Ca- and labels it ‘future-imperative’, whereas I instead take this to be two distinct morphemes: an imperative a- (discussed below in §5.2.4), and the negative ta- discussed herein.

As Osborne does not provide much data, and since the example sentences provided in his thesis are not linked to any recordings, it is impossible to know the basis on which he analyses this affix. My transcription of Osborne’s recordings do not justify such an analysis.39

Verbs marked for negative polarity usually contain the morpheme ta-, and will often collocate with one of the independent negative particles arunkwa or karluwu, or the prohibitive ngajirri.

148  ngiyarnunkwa nguritangilimparra
    ngiya -arnunkwa ngi- ri- ta- angilimparra
    1MIN -NEG 1MIN- ?- NEG- be_ deaf
    ‘I’m not deaf’ (AW_20120413_04: 00:02:08)

149  ngiya karluwu ngumawuntapirni
    ngiya karluwu ngi- ma- wuni- ta- pirni
    1MIN NEG 1MINS- IRR- 3AUGO- NEG- hit
    ‘I’m not going to hit them’ (CO_708B: 00:44:25)

150  ngajirri ngimpaingintawvari
    ngajirri nyi- mpi- a- ngini- ta- umwari
    PROH 2MIN$- NPST- IMP- 1MINO.IRR- NEG- leave
    ‘don’t leave me here’ (AW_20120411_03: 00:09:02)

The ta- prefix may also co-occur with irrealis marking. In (150) above for example, the object marker ngini- ‘1MINO.IRR’ encodes irrealis, and further in (151), the negative polarity marker ta- co-occurs with the ma- irrealis marker (see §5.2.4).

151  ngarrarnunkwa yinimatakupawurli
    ngarra -arnunkwa yi- ni- ma- ta- akupawurli
    3MIN.M -NEG 3MIN.M.PST- HITH- IRR- NEG- return
    ‘he might not be coming back’ (AW_20120413_01: 00:03:35)

There are still some unexplained morphological phenomena that could have led Osborne to analyse the negative prefix as several distinct morphemes in different contexts, such as the existence of unexplained morphemes (such as ri- in (148)), whose distribution and function I cannot discern, and which I therefore leave unglossed. As Osborne did not include references to the data in his recordings, it is difficult to say why he takes one analysis over another.
It is difficult to tease the function and semantic contribution of this morpheme apart from that of the negative particles *arrunkwa*, *karluwu* and the prohibitive *ngajirri*, or from the irrealis prefix *ma*-, as there are no examples of *ta-* occurring without at least one of the others.

I argue, contra Osborne, that there is a distinction between the *ta-* prefix encoding negative polarity, as described above, and an imperative prefix. The imperative *a-* is discussed in the next section.

5.2.4 Mood

As with many categories in the Traditional Tiwi verb, mood is distributed across multiple verb positions. Position –11 contains the irrealis markers *ma-* which is a general irrealis marker, *wa-* ‘frustrative’, *wu-* ‘obligative’, and *a-* ‘imperative’. Irrealis mood is also marked on object and oblique agreement markers in position –9 by the use of the irrealis series of agreement markers. In addition, there are several periphrastic means of expressing irrealis, such as the particles *arramukuta* and *mana*, both of which are glossed as ‘maybe’.

The affix *ma-* is glossed simply as ‘irrealis’ and indicates events whose actualisation is not certain. It is generally rendered in English using modals such as ‘might’. Osborne describes the subjunctive *ma-* as encoding events that are “merely possible or hypothetical rather than actual” (1974:43). The irrealis can occur with both positive and negative polarity (marked by *ta-* and discussed in the previous section), and can also occur in interrogative structures, as shown by (153).

(152)  
mana yi tama wuni pirni
maybe 3MINS.M.PST-IRR 3AUGO-hit
‘he might hit them’  
(stimulus: ‘is he going to hit them?’)  
(CO_708B: 00:37:45)

(153)  
nuwa nqintimapirnana
nuwa nyi nti ma pirni =ana
2AUG 2AUGS-PST(O:F)-IRR-hit =Q
‘might you hit her?’  
(stimulus ‘are you (pl) going to hit her?’)  
(CO_708B: 00:40:11)
ngarrarnunkwa yinimatupawurli
ngarra -arnunkwa yi- ni- ma- ta- akupawurli
3MIN.M -NEG 3MIN.M.PST- HTH- IRR- NEG- return
‘he might not be coming back’  (AW_20120413_01: 00:03:35)

arnunkwa ngumatamarruri
arnunkwa ngi- ma- ta- marri- uri
NEG 1MIN.S.PST- IRR- NEG- COM- go
‘I might not take (her)’  (AW_20120411_02: 00:44:50)

ngiya karluwu ngumangantapirni
ngiya karluwu ngi- ma- ngani- ta- pirni
1MIN NEG 1MIN.S.PST- IRR- 1AUGO- NEG- hit
‘I might not hit you’  (stimulus: ‘I’m not going to hit you’)  (CO_708B: 00:43:40)

The frustrative *wa*- encodes events that do not reach their end-point, as intended by the subject. As such, it generally marks verbs of volition such as *wirri* ‘bite’ and is translated using phrases such as ‘try to do but fail’ or ‘do in vain’. However, there are very few instances of the frustrative *wa*- in my corpus.

pulangumwani yuwaningi wirri
pulangumwani yi- wa- ngini- wirri
dog 3MIN.S.PST- FRUST- 1MINO.IRR- bite
‘the dog is going to try and bite me (and fail)’  (CO_708B: 00:17:51)

pwakayini ngintuwangirrima
pwakayini ngi- nti- wa- ngirri- ma
play 1AUGS- PST- FRUST- 3MINOBL.F.IRR- do
‘we tried to play with her (but with no success)’  (Lee, 1987:181)

nguwajamarnipa
ngi- wa- amarnipa
1MIN.NPST- FRUST- rise
‘I try to get up’  (Lee, 1987:195)

a- wa- ri- mangapa
3MIN.M.NPST- FRUST- ?- drink
‘he tries to drink’  (Osborne, 1974:44)
The obligative *wu-*, which encodes the obligation of the subject to undertake the action encoded by the verb and is thus translated as ‘should do’ or ‘have to do’, is very infrequent in both the corpus and the various published sources.

(160) \[ ngurruwulinawangiyim \]
\[ ngi- rri- \textbf{wu} - tinawu - anyimi \]
IMIN- PST- **OBLIG**- shave -COMPL
‘I have to shave (my beard) off’ \hspace{1cm} (AW_20120411_02: 00:08:18)

(161) \[ awukirimi \]
\[ a- \textbf{wu} - kirimi \]
3MIN.M.NPST- **OBLIG**- do
‘he has to do it’ \hspace{1cm} (Osborne, 1974:44)

Osborne (1974:66-67) does not analyse the imperative as being in the same category as the other moods. Under his analysis, outlined in §4.3.3, imperative verbs are formed by replacing the regular subject and tense prefixes with an imperative prefix *ta-*, where the subject is 2MIN.

(162) \[ tayakupawurli \]
\[ ta- akupawurli \]
**IMP**- go\_back
‘go back!’ \hspace{1cm} (Osborne, 1974:67)

(163) \[ takirimi tutuni \]
\[ ta- kirimi \hspace{0.5cm} tutuni \]
**IMP**- make \hspace{0.5cm} gravepost
‘make graveposts!’ \hspace{1cm} (Osborne, 1974:67)

2AUG subjects take the regular subject marker *nyi-*, followed by the imperative marker, which in this case has the surface realisation *rra-*.  

(164) \[ nyirrakupawurli \]
\[ nyi- \textbf{rra} - akupawurli \]
2AUG- **IMP**- return
‘you mob, go back!’ \hspace{1cm} (Osborne, 1974:67)

(165) \[ nyirrakirimi tutuni \]
\[ nyi- \textbf{rra} - kirimi \hspace{0.5cm} tutuni \]
2AUG- **IMP**- make \hspace{0.5cm} gravepost
‘you mob, make graveposts!’ \hspace{1cm} (Osborne, 1974:67)

Prohibitives, or negative imperatives, are not marked with this morpheme under Osborne’s (1974:69) analysis. Instead they take the prohibitive particle *ngajiti/ngajirri*. Note in example
(169) that the non-past tense marker, ordinarily *mpi*- or a morphophonological variant *mpu*-, occurs here as *mpa*-. It also carries stress.

\[\text{(166)} \quad \text{ngajirri nyimpangintamwari} \]
\[\text{ngajirri} \quad \text{nyi-} \quad \text{mpa-} \quad \text{ngini-} \quad \text{ta-} \quad \text{umwari} \]
\[\text{PROH} \quad \text{2MINS-} \quad \text{NPST-} \quad \text{1MINO.IRR-} \quad \text{NEG-} \quad \text{leave} \]
\['\text{don’t leave me here!’ (AW_20120411_03:00:09:02)}\]

I analyse the verbs in these examples as all containing an imperative mood marker *a*-, which coalesces with the preceding morpheme, either a tense marker or a fused subject-tense marker, and replaces its vowel. Recall from §4.1.1 that Traditional Tiwi has a single laminal stop, which is realised as lamino-palatal when it precedes a high-front vowel, and lamino-dental elsewhere. It is possible that Osborne heard an initial lamino-dental stop [t̪] as an apico-alveolar stop [t], and that the initial consonants in the examples (162) and (163) above are actually both *j*. These two sounds are very similar and could have easily been mistaken for one another.

I argue therefore that the initial syllable in these verbs is actually *ja*-, and is formed by the coalescence of the 2nd person past tense subject marker *ji*- and the imperative mood marker *a*-, and that this mood marker can similarly coalesce with other preceding syllables.

Some of the examples above can therefore be reanalysed as follows:

\[\text{(167)} \quad (=162) \]
\[\text{jayakupawurli} \quad \text{ji-} \quad \text{a-} \quad \text{akupawurli} \]
\[\text{2MIN.PST-} \quad \text{IMP-} \quad \text{go_back} \]
\['\text{go back!’ (Osborne, 1974:67)}\]

\[\text{(168)} \quad (=165) \]
\[\text{nyirrakirimi tutuni} \quad \text{nyi-} \quad \text{rri-} \quad \text{a-} \quad \text{kirimi} \quad \text{tutuni} \]
\[\text{2AUG-} \quad \text{PST-} \quad \text{IMP-} \quad \text{make} \quad \text{graveposts} \]
\['\text{‘you mob, make graveposts!’ (Osborne, 1974:67)}\]

This also accounts for the example noted above, in (169), in which the tense marker, ordinarily *mpi*-, surfaces as *mpa* due to its having been coalesced with the imperative *a*-. It can therefore be similarly reanalysed as follows.
This is confirmed by my own corpus, in which parallel examples clearly contain an initial lamino-dental stop.

Due to insufficient data, the verbal position in which a- imperative occurs is uncertain. My placing it in this position along with the other mood markers is consistent with the corpus data that illustrates its use, although the data is limited. However, there is additional morphological evidence to consider the imperative to form a category with the other moods, in that they all produce the same effect with respect to tense marking.

As many of the examples in this section illustrate, irrealis marked verbs tend to exhibit non-canonical tense marking, such that past tense marked verbs refer to non-past events, typically events that are interpreted as occurring in the future. (172) below exhibits canonical tense marking, in the sense that the tense marking is past, and the event that the verb describes occurs in the past. (173) however, is almost exactly parallel, except that it marks subjunctive mood with ma- and the particle mana ‘maybe’. While the fused subject/tense marker indicates past tense, the denoted event actually occurs in the future.
Examples of this occurring with frustrative and obligative are given below in (174) and (175) respectively. Imperatives verbs can be seen exhibiting this behaviour in several examples above.

(174) *pulangumwani yuwanginiwirri*

*pulangumwani* yi- *wa*- ngini- *wirri*

dog 3MIN.S.M.PST- **FRUST**- 1MIN.O.IRR- bite

‘the dog is going to try and bite me (and fail)’  (CO_708B: 00:17:51)

(175) *ngurrwutinawanyim*

ngi- rri- *wu*- tinawu- anyimi

1MIN- PST- **OBLIG**- shave -COMPL

‘I have to shave (my beard) off’  (AW_20120411_02: 00:08:18)

Although there is insufficient data to conclude much about this phenomenon in Tiwi, it does not appear to be categorical. There are other instances of verbs that encode irrealis mood that do not exhibit non-canonical tense marking. In (176) for example, the tense marking is non-past, and the time-reference is future. It is therefore regular with respect to the marking of tense.

(176) *ngajirri ngimpangintangimparighi*

*ngajirri* nyi- *mpi*- a- ngini- ta- angimpari- *ighi*

PROH 2MIN.S- **NPST**- IMP- 1MIN.O.IRR- NEG- wake- **CAUS**

‘don’t wake me up!’  (AW_20120411_03: 00:25:05)

Without a more thorough investigation, and in particular, more morphologically and semantically varied examples, very little can be concluded of this phenomenon other than noting that it appears to occur with all irrealis marked verbs. It does however, provide further evidence that the imperative is a mood and thus classes together with subjunctive, frustrative and obligative, as it exhibits the same unusual morphological phenomena.

5.3 Location, Direction, Time and Motion

Traditional Tiwi inflected verbs also encode the location or direction of the event with respect to the speaker, the time of day that the event takes place, as well as associated motion; whether or not the event is carried out while the subject is moving.
As with other verbal categories, these categories are all distributed across several templatic positions, and some affixal positions mark more than one category. That is, time of day is marked in two mutually exclusive positions; morning in position –10, and evening in –6. Location and direction are marked in two positions, –12 and –7, each of which contains a marker that can function as either location or direction, depending on the event semantics of the verb. Position –7 also contains an associated motion marker. Finally, the last templatic position, +4, contains a rarely used location marker.

The reduced template in Table 28 shows the relative verbal positions of the affixes discussed in this section.

Table 28: Reduced template of location, direction and temporal affixes

<table>
<thead>
<tr>
<th>-12</th>
<th>-10</th>
<th>-7</th>
<th>-6</th>
<th>0</th>
<th>+4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locative</td>
<td>Temporal</td>
<td>Associated motion</td>
<td>Temporal</td>
<td>Stem</td>
<td>Locative</td>
</tr>
</tbody>
</table>

5.3.1 Location and Direction

Position –12 contains one marker, *(wu)ni*, that functions as both a location and direction marker. It encodes distance from the speaker or, if the verb encodes motion, direction towards the speaker. Distance from the speaker can either be interpreted spatially, as in (178), or temporally (179). This marker is optional, and its absence, as shown in (177), entails that distance from the speaker is not a salient semantic feature. I gloss this morpheme as LOC (locative). There is no contrasting proximal marker within the verb. As such, the semantic possibilities are either that the event happens at a salient distance from the speaker, or that the distance is not relevant.

(177) *gimarririkupimurnipa*
*yi- marri- kupi- amurnipa*
3MIN.M.PST- COM- tobacco- rise
‘he got up with tobacco’

(CO_700B: 01:02:07)

(178) *gimarririkupiyamurnipa*
*yi- *ni*- marri- kupi- amurnipa*
3MIN.M.PST- LOC- COM- tobacco- rise
‘he got up over there with tobacco’

(CO_700B: 01:02:18)
Verbs that encode motion, as in _uri_ ‘go’, _apunya_ ‘follow’ and _akupawurli_ ‘return’, force 
(_wu)_ni- to function as a direction marker, encoding direction towards the speaker, and in this 
case it is glossed HITHER.

(179)  
\begin{align*} 
\text{maningawu waya jiniwapa yinkitiyana} \\
\text{maningawu waya ji- ni- apa yinkiti =ana} \\
\text{grandmother already 2MIN.PST- LOC- eat food =Q} \\
\text{‘grandmother, have you eaten?’ (AW_20120413_01: 00:14:30)} 
\end{align*}

(180)  
\begin{align*} 
\text{yiniwaturimarrikupuri} \\
yi- ni- watu- marri- kupi- uri \\
3MIN.M.PST- HITH- MORN- COM- tobacco- go \\
\text{‘he brought tobacco (here) in the morning’ (CO_700B: 01:00:06)} 
\end{align*}

(181)  
\begin{align*} 
\text{jinimantampunya} \\
ji- ni- mani- apunya \\
3MINS.F.PST- HITH- 1/2MINO- follow \\
\text{‘she followed us here’ (CO_700B: 00:33:59)} 
\end{align*}

(182)  
\begin{align*} 
\text{jinimarruri ngiya} \\
ji- ni- marri- uri ngiya \\
3MINS.F.PST- HITH- COM- go 1MIN \\
\text{‘she brought me here’ (AW_20120411_03: 00:10:48)} 
\end{align*}

(183)  
\begin{align*} 
\text{nyimpunuwujana} \\
yi- mpi- ni- wuja =ana \\
2MIN- NPST- HITH- go =Q \\
\text{‘are you coming here?’ (AW_20120411_02: 00:36:33)} 
\end{align*}

(184)  
\begin{align*} 
\text{awunujakupawurli} \\
a- wuni- akupawurli \\
3MIN.M.NPST- HITH- return \\
\text{‘he’s coming back here’ (AW_20120413_01: 00:00:34)} 
\end{align*}

The semantic link between the two functions of (_wu)_ni- is that the space encoded by the 
locative use is taken to be the source of motion of the directional use.

There is another morpheme in the Traditional Tiwi verb that may be in the same category as 
(_wu)_ni-, but which occurs in a different templatic position. The morpheme _ingi_- occurs in 
position –7, which, as detailed in §5.3.3, also contains the associated motion morpheme _irraya_- 
‘to do while walking along’. Osborne considers _ingi-_ to mean ‘to do while standing up’, and 
takes it to be in the same category as _irraya_-_. He labels this verbal position ‘stance’. Lee 
however, provides examples that show clearly that _ingi-_ has a locative function, possibly a
directional function, and in addition, that it permits the same temporal extension of its locative function that \( (wu)ni \)- does. As such, I agree that \( (wu)ni \)- and \( ingi \)- form a category of locative/directional markers.

Osborne (1974:46) provides only the following two examples as a minimal pair to illustrate the function of \( ingi \)- and \( irraya \)- which he glosses as ‘standing up’ and ‘walking along’ respectively.\(^{40}\)

\[
(185) \quad \text{yi- pu-} \text{ng- apa} \\
\text{he- cv- hw- eat} \\
\text{‘he ate standing up’} \\
(\text{Osborne, 1974:46})
\]

\[
(186) \quad \text{yi- pu-} \text{rray- apa} \\
\text{he- cv- wk- eat} \\
\text{‘he ate walking along’} \\
(\text{Osborne, 1974:46})
\]

Data given by Lee (1987:182-83) suggests that \( ingi \)- may actually function as a locative/directional. She glosses \( ingi \)- as ‘out bush’ or ‘away from camp’, however the free translations for examples (187) and (188) in particular imply that \( ingi \)- can mean ‘away from here’ or ‘further away’.

\[
(187) \quad \text{yi- mini-} \text{ngi- miji} \\
\text{3MINS.M.PST- 1MINO- away- run_over} \\
\text{‘he ran me over out bush’} \\
(\text{Lee, 1987:184})
\]

\[
(188) \quad \text{kakikali ngarruwujirringinakirringimi} \\
\text{kakikali nga- rri- wunjingu-} \text{ingi- makirringi- mi} \\
\text{run 1/2AUG- PST- DUR- away- frightened- do} \\
\text{‘we were running in fright (all over the place)’} \\
(\text{Lee, 1987:184})
\]

To further support the case for \( ingi \)- as forming a locative/directional category with \( (wu)ni \)- is the fact that it similarly has an extended temporal function, in which it appears to mean ‘a long time ago’, as shown in (189).

\(^{40}\) While I ordinarily update Osborne’s and Lee’s glosses to reflect my analysis, in this example I have left the glosses exactly as given in the original. The reason for this is that I cannot replicate it and so cannot say whether the connective (cv) \( pu \)- is a part of the morpheme \( ingi \)- or, as Osborne implicitly claims, a distinct morpheme. Moreover, Osborne does not provide an explanation for the abbreviation hw. I have, however, updated Osborne’s phonetic orthography to the modernised practical orthography.
It may therefore encode events that are further distant from the spatial or temporal deictic centre than those encoded by *(wu)ni-*.

Osborne (1974:45) also describes a final suffix on Traditional Tiwi verbs that is only used for imperative verbs and encodes distance or location. He gives two possible forms in this slot, *-wa* and *-pa*, and considers them to be morphophonological variants of one another (1974:33). Lee follows Osborne, although she simplifies his morphophonological conditioning such that *-pa* occurs after ‘a’ (1987:185).

Neither of these forms is found in my own corpus and published examples of them are rare. As such, I cannot confirm or refute Osborne or Lee’s claims.

### 5.3.2 Time of Day

Inflecting verbs may optionally encode the time of day that an event takes place. Only two possible times of day are attested, although more may have previously existed. These two times of day are marked on the verb in two distinct verbal slots. Position –10 contains the morning marker *watu-* and position –6 contains the evening marker *ki-*.

Since the times encoded by these two morphemes are mutually exclusive, the morphemes themselves are similarly mutually exclusive. These temporal prefixes are independent of tense; they locate the event with respect to the time of day rather than with respect to the time of utterance, so both morning and evening prefixes can occur in both past and non-past tense.
Examples (193) and (194) in particular demonstrate that these two markers occur in distinct, non-adjacent verb positions, as they are separated by the durative prefix *wunjingu*.

(192) *wakwakini ywatatuminigirlimpangiparighi*

wakwakini  yi- *watu-* mini- ungirlimpangi- angimpari -ighi
crow 3MIN.S.M.PST- **MORN-** 1MINO- sleep- wake -CAUS

‘the crow woke me up in the morning while I was sleeping’  
(AW_20120413_03: 00:18:35)

(193) *juwatuwujungumuwani*

ji- *watu-* wunjingu- nuwu -ani
3MIN.F.PST- **MORN-** DUR- sit -ITER

‘she was sitting down for a long time in the morning’  
(CO_700B: 00:49:05)

(194) *juwunjukumuwani*

ji- wunjingu- ki- nuwu -ani
3MIN.F.PST- **DUR-** EVE- sit -ITER

‘she was sitting down for a long time in the evening’  
(CO_700B: 00:49:18)

(195) *ngurrukapa*

ngi- rri- **ki-** apa
1MIN- PST- **EVE-** eat

‘I ate in the evening’  
(CO_699B: 00:18:58)

While Osborne’s recordings contain many instances of the evening marker *ki-*, my own recordings do not contain any. Despite my investigating forms specifically designed to elicit *ki-*, my speaker never produced it. *Watu- ‘morning’* however, is frequently heard throughout my recordings. This suggests that the *ki-* marker may have been dropped from the system since Osborne’s fieldwork, or at least was not known to Anita.

There are also periphrastic means of expressing the same concepts as well as a range of other times of day. As with the incorporation of events and entities (see chapter 7), the free forms bear no phonological resemblance to the bound forms.

<table>
<thead>
<tr>
<th></th>
<th>free</th>
<th>bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>morning</td>
<td><em>japinari</em></td>
<td><em>watu-</em></td>
</tr>
<tr>
<td>evening</td>
<td><em>japinawami</em></td>
<td><em>ki-</em>**</td>
</tr>
</tbody>
</table>
Given that the *ki-* ‘evening’ particle appears to have dropped out of use between the 1960s and today, it is plausible that there were originally more temporal prefixes in either of these positions, denoting other times of day, that have since been dropped from the system.

### 5.3.3 Associated Motion

There is one affix in Traditional Tiwi verbs that encodes associated motion. While it is claimed that a second marker in the same position, *ingi-*., also encodes associated motion, I argue that it is actually a location/direction marker meaning ‘far away/thither’ (see §5.3.1). Lastly, a suffix that appears to encode motion, -*mami*, is actually an imperfective aspect marker (see §5.2.2).

Verbal position –7, labelled ‘stance’ by Osborne (1974:46), a term which Lee follows (1987:182-85), is claimed to contain two morphemes: *irraya-* ‘walking along’ and *ingi-* ‘standing up/away from camp’. There are many empirical issues with the latter; it is not found in the corpus at all, and all instances of it in the published sources show it functioning as a location/direction marker. *Irurraya-* ‘walking along’ however, is moderately well represented in the corpus, although all examples are structurally parallel. This affix is hardly discussed by either Osborne or Lee, save for one example each, given below in (196) and (197). I gloss these as AM to refer to ‘associated motion’. 41

(196)  
yi- **pirraya**- apa  
3MIN.M.PST- AM- eat  
‘he ate walking along’  

(Osborne, 1974:46)

(197)  
ngi- **pirraya**- mangapa  
1MIN.NPST- AM- drink  
‘I’ll drink while I’m walking along’ or  
‘I’ll drink along the way’  

(Lee, 1987:184)

While I was unable to find any examples of this morpheme in Osborne’s recordings, I was able to reproduce it during my own research, as shown below:

41 Both Osborne and Lee claim that this morpheme has an underspecified initial consonant, and list it as *Cirraya-* which, in these examples, surfaces as a labial *p*. My data does not bear this out, and I take the morpheme to be simply *irraya*. The emergence of the *p* in these examples I cannot explain, but a similar phenomenon seems to occur quite frequently with vowel-initial morphemes, and may be euphonic epenthesis. These epenthetic consonants are not within the scope of this thesis.
While Osborne and Lee both consider this morpheme to be a distinct associated motion morpheme, it is entirely possible that it is an incorporated verb in position –4. There are no examples of this morpheme occurring alongside anything that would intervene between –7 and –4, such as the evening particle ki- (discussed in the previous section) or the negative polarity marker ta- (discussed in §5.2.3), so it is difficult to prove its exact location in the template. In the absence of examples that include these potentially intervening morphemes, the corpus data is consistent with both analyses.

Without solid enough data on which to claim that irraya- is an incorporated verb meaning ‘walk’, I must concur with both Osborne (1974:46) and Lee (1987:184) that it is not an incorporated verb, but a distinct particle that encodes associated motion.

5.4 Incorporation

Immediately prior to the verb stem in positions –4 through to –1, the Traditional Tiwi verb allows the incorporation of lexical elements. There are four distinct kinds of incorporation: body part nominal incorporation, generic nominal incorporation, verbal incorporation, and the incorporation of comitative and privative adjuncts.
Each of these is discussed in brief in the following sections, although for a further discussion of incorporation in Traditional Tiwi and how it compares with incorporation phenomena that have been identified in other languages, see chapter 7.

The reduced template in Table 30 shows the relative position of the incorporation affix positions with respect to each other and the stem.

<table>
<thead>
<tr>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Incorporate</td>
<td>Comitative</td>
<td>Nominal Incorporate</td>
<td>Prative</td>
<td>Stem</td>
</tr>
</tbody>
</table>

### 5.4.1 Noun Incorporation

Nominal lexical elements can be incorporated into Traditional Tiwi inflecting verbs into position –2, considerably close to the verb stem. Incorporated nominals either function as, or otherwise are associated with, one of the arguments encoded by the verb. The argument that the incorporated nominal is related to is always the lowest grammatical function licensed by the verb, where the hierarchy of grammatical functions is such that subjects outrank objects, which outrank obliques. That is, if the verb is intransitive, then the incorporated nominal is associated with the subject, as shown in (202).

(202) ngarra-tuwu yu- warla- yapirraya Purrukuparli

3MIN.M -CT 3MIN.M.PST- spirit- go_down PN

‘Purrukuparli went down as a spirit’

(Lee, 1987:162)

If the verb is transitive, the incorporated nominal is associated with the object. In (203), the incorporated nominal *pilinganti*- ‘basket’, fills the object grammatical function required by the transitive verb *wunga* ‘grab’, as demonstrated by the fact that it triggers gender agreement on the tense marker *nti*- ‘PST(O:F)’, an effect that is restricted to objects (see §6.2.2 for a fuller description of this phenomenon).

(203) ngintipilingantunga

ngi- nti- pilinganti- wunga

1MINS- PST(O:F)- basket- grab

‘I grabbed the basket’

(CO_699A: 00:21:43)
Finally, if the verb encodes an oblique argument, then it is this argument with which the incorporated nominal is associated. In (204), the incorporated nominal *piyanti* - ‘wallaby’ is associate with the argument that is encoded on the verb as an oblique, and expressed externally by *pwajimwalintiya* ‘wallaby’.

(204)  
\[ \begin{array}{l}
\text{kurlalaghag *pwajimwalintiya *pirrimirripiyantingimamini} \\
\text{kurlalaghag *pwajimwalintiya} \\
\text{hunting *wallaby.F} \\
\text{pi- rrri- mirri- *piyantingi- ma -mini} \\
\text{3AUGS- PST- 3MINOBL.F- *wallaby- do -ITER} \\
\text{‘they would go hunting for wallaby’} \\
\end{array} \]

(205)  
\[ \begin{array}{l}
\text{purruminikiringa} \\
\text{pi- rrri- mini- *kiri- nga} \\
\text{3AUGS- PST- 1MINO- hand- grab} \\
\text{‘They grabbed me by the hand’} \\
\end{array} \]  

The above examples all illustrate the incorporation of generic entities. The incorporation of body part nominals is another major use of nominal incorporation in Traditional Tiwi. All examples of body part incorporation are within transitive verbs, and generally those that take a patient as object. The incorporated body parts specify where on that patient the event takes place. For example, in (205), the incorporated nominal *kiri* ‘hand’, is interpreted as being part of the patient, which is encoded by the agreement marker *mini* - ‘1MINO’.

Nominal incorporation is discussed in more detail in §7.2.

### 5.4.2 Verbal Incorporation

In addition to nominal lexical elements, Traditional Tiwi inflecting verbs also allow the incorporation of lexical elements that denote events.

Semantically, incorporated verbs encode simultaneous activity with the inflected verb and are predicated of the lowest grammatical function. That is, the performer of the incorporated event is coreferential with the subject of an intransitive verb, as in (206) and (207), the object of a transitive verb, shown in (208), or the oblique argument when they are marked, in (209).
Incorporated verbs occupy a distinct verbal position from incorporated nominals in the inflecting verb. While nominal incorporates occur in position –2, verbal incorporates occur in position –4. Consequently they can co-occur, as shown in example (209) above, and further, by (210) and (211) below.

(209)  *gimungirlipalipiyakinya*  
yi- mi- ungirlimpangi- alipi- akinya  
3MINS.M.PST- 1MINOBL- sleep- raw_meat- steal  
‘he stole raw meat from me while I was sleeping’ (CO_699A: 00:55:37)

See §7.3 for a more detailed analysis of verbal incorporation phenomena in Traditional Tiwi.

### 5.4.3 Comitative and Privative

Comitation and privation – the having and lacking of an entity respectively – are both marked on the verb with prefixes in distinct positions. Comitation is marked by either *marri-*
or *maji-* in position –3, whereas privation is marked by *wamini-* in position –1. Both comitative and privative may take a nominal entity in the incorporated nominal position, –2, as their complement. The comitative therefore comes before its complement, as shown in (212) whereas the privative comes after, as in (213).

(212) \[ ginimarrikupiyamurnipa \]
\[ yi- ni- marri- kupi- amurnipa \]
3MIN.M.PST- LOC- COM- tobacco- rise
‘he got up over there with tobacco’

(213) \[ ginirikupuwaminiyamurnipa \]
\[ yi- ni- ri- kupi- wamini- amurnipa \]
3MIN.M.PAST- LOC- ?- tobacco- PRIV- rise
‘he got up over there with no tobacco’

As with nominal and verbal incorporation, the argument with which the complement of the comitative or privative is associated is the lowest grammatical function licensed by the verb. As such, the complement of a comitative or privative is interpreted as being with the subject of an intransitive verb as in (214), or the object of a transitive verb, as in (215).

(214) \[ marrumajinkiliwuja \]
\[ mu- rri- maji- inkili- wuja \]
1/2MIN- PST- COM- vehicle- go
‘we went by car’

(215) \[ yu- wuni- marri- wa- angirri \]
3MIN.S.M.PST- 3AUG- COM- word- send
‘he sent them with a message/words’

No examples exist in my corpus in which a verb that encodes an oblique argument also marks a comitative or privative.

Both comitative and privative markers can occur without an overtly expressed complement. The elided nominal can either be understood from context, as in (216), or is left unspecified as in (217).

(216) \[ pu- rrri- wamini- kuruwurli \]
3AUG.PST- PST- PRIV- be_cranky
‘they were cranky without (beer)’

(Lee, 1987:164)
There appears to be no semantic difference between the comitative markers *maji-* and *marri-*; each contribute the same function to the verb. There is however, a distributional distinction in that some incorporated forms collocate with one, and some with the other. For example, *kupi-* ‘tobacco’ requires the comitative *marri-* as in (218) while *ati-* ‘axe’ takes *maji-* instead, as shown by (219).

The distribution of nominals that take *marri-* and those that take *maji-* is not related to any easily discernible feature. In §7.2.2 I show that incorporated generic nominals trigger agreement shift and are therefore categorised as to gender. *Kupi-* ‘tobacco’ is masculine and *ati-* is feminine, which would suggest that *marri-* and *maji-* correspond to masculine and feminine nominals respectively. However there are counterexamples. The incorporated forms *ilipi-* ‘cooked meat’ and *ilinganta-* ‘basket/billycan’ are both feminine, yet both take the comitative *marri-* as in (219) and (220).
If the distribution of the comitative markers were related to the gender of their complement, then my analysis would predict both these verbs to take the māji- form of the comitative marker.

5.5 Verb Derivations

The four verb derivational suffixes – reciprocal -ajirri, reflexive -amiya, causative -(am)ighi, and completive -anyimi – all occur in a single verbal position, +1, immediately after the verb stem, and are mutually exclusive.

Both the reflexive and reciprocal suffixes result in the detransitivisation of an otherwise transitive verb, as they force the coreference of the object with the subject.

(221)  
\[
yikara ngurrwawurrinamiya
\]
\[
yikara ngi- rri- wawurrini -amiya
\]
\[
\text{hand } 1\text{MIN- PST- cut } -\text{REFL}
\]
\[
\text{‘I cut myself on the hand’ } \quad \text{(AW_20120411_01:00:07:43)}
\]

(222)  
\[
purrumajawunjirri
\]
\[
\text{pi- rri- majuwuni- ajirri}
\]
\[
3\text{AUG- PST- wrestle } -\text{RECIPI}
\]
\[
\text{‘they wrestled each other’ } \quad \text{(AW_20120411_01:00:10:46)}
\]

(223)  
\[
apinayi wuwunjungupungurraghajirri malakaninguwi
\]
\[
apinayi wu- wunjingu- pungurragha -ajirri malakaninguwi
\]
\[
\text{DIST.PL 3\text{AUG- DUR- hit_head } -\text{RECIPI} young_man.PL}
\]
\[
\text{‘those young men are hitting each other on the head’ } \quad \text{(AW_20120406_01:00:25:15)}
\]

As discussed in §4.2.2.1, -amiya can also function as a pronominal suffix. The difference however, is that the pronominal suffix -amiya does not interact with the argument structure. Instead, the meaning is that the action is done for or by oneself, as illustrated in (224)

(224)  
\[
gataw -amiya a- papurti
\]
\[
3\text{MIN -REFL} \quad 3\text{MIN.M.NPST- go_up}
\]
\[
\text{‘he goes up (to the bush) for himself’ } \quad \text{(Lee, 1987:112)}
\]

The causative -(am)ighi appears to be limited to intransitive, unaccusative verbs, from which it derives a transitive verb by adding an external agent, a causer. The subject of the base intransitive verb thus becomes the object of the causativised verb. For example, the subject of
the intransitive verb *angimpari* ‘awake’ in (225) becomes the object of the derived transitive verb *animparighi* ‘cause to wake’ in (226). Similarly for the intransitive verb *akupawurli* ‘return’ and the causativised verb *akupawurlighi* ‘bring back’ in examples (227) and (228).

(225)  
ngurratupangimpari  
ngi- rri- watu- angimpari  
1MIN- PST- MORN- awake  
‘I woke up in the morning’  (AW_20120413_03:00:16:11)

(226)  
purrumintangimparighi  
pi- rri- mini- ANGIMPARI- amighi  
3AUGS- PST- 1MINO- awake -CAUS  
‘they woke me up’  (AW_20120411_03:00:22:31)

(227)  
gurrumajingiliyakupa  
gi- rri- maji- ngili- akupawurli  
1MIN- PST- COM- vehicle- return  
‘I went back by car’  (AW_20120411_02:00:23:01)

(228)  
yiminitakupawulamighi  
yi- mini- akupawurli- amighi  
3MINS.M.PST- 1MINO- return -CAUS  
‘he brought me back’  
lit ‘he made me return’  (AW_20120411_02:00:31:32)

All attested examples of the causative suffix occur on base intransitive unaccusative verbs. There are no attested examples of base transitive verbs that are marked with the causative suffix.

There may be a further causative verb suffix -(t)ugha, although there are only a few examples in the corpus, and it was not noted at all by either Osborne (1974) or Lee (1987). As such its status remains uncertain. Below are the only clear examples. The verb *kura* ‘die’ ordinarily exhibits lexical agreement such that the subject is always 3MIN feminine, and the experiencer is encoded as an oblique argument (see §6.3). When derived by -(t)ugha however, as in (229), the resultant verb behaves as a regular transitive verb meaning ‘kill’. The verb *akupawurli* ‘return/go back’ when suffixed by -(t)ugha, as in (230) behaves as though it is suffixed with the regular causative -(am)ighi.
yuwinikuratighamini
yi- wuni- kura -tigha -mini
3MINS.M- 3AUGO- die -tugha -ITER
‘he killed them one by one’  (AW_20120319_01: 00:16:28)

jayamajakupawurlugha awunyirra
ji- a- ma- akupawuri -ugha awunyirra
2MIN.PST- IMP- IRR- return -ugha DEM.F
‘return it!’  (AW_20120307_01: 00:01:43)

The relationship between the argument structure of verbs derived by (t)igha- and their corresponding base verbs is not clear on the basis of these two examples. One of the base verbs functions as a regular unaccusative verb, while the other is subject to lexicalised agreement, meaning that the assignment of grammatical functions is not regular. Both causativised verbs, however, function canonically.

The last member of the verbal derivations category does not involve a change of valency of the verb, but still functions as a semantic derivation. The completive suffix -anyimi has an effect on the event semantics of the verb such that it places focus on the end-point of the event. For example, when suffixed with -anyimi, the verb wawurrina ‘cut’ means ‘sever/cut off’, and the verb kirimi ‘do/make’ instead means ‘finish’.

yimutawurrinanyim
yi- mutu- wawurrina -anyimi
3MINS.M.PST- arm- cut -COMPL
‘he cut (his) arm off’  (AW_20120411_01: 00:16:15)

ngurruwutinawuanyim
ngi- rri- wu- tinawu -anyimi
1MIN- PST- OBL- shave -COMPL
‘I have to shave (my beard) off’  (AW_20120411_02: 00:08:18)

ngurruwapakinyimanyimi
ngi- rri- apukinyimi -anyimi
1MIN- PST- finish _eat -COMPL
‘I finished up eating all my food’  (AW_20120319_01: 00:20:53)

pu- rri- kirimi -anyimi
3AUG- PST- do -COMPL
‘they finished it’
or ‘they did it completely’ (Osborne, 1974:45)
The fact that these four affixes comprise a single verbal slot means that they are unable to co-occur. Attempts on my part to produce novel verbs containing both the completive -anyimi and the reflexive -amiya were accepted and understood by Anita, but unable to be produced naturally, and were repeated back with either one or the other, but never both, as the dyad in (236) demonstrates.

(236) “ngurrumatingiritinawamiya”

kuwa, “ngurrumatingiritinawamiya”

The description of agreement, for example (see §5.1), presents the problem of morphological interaction between subject, object and tense, which results in forms that appear to have switched argument denotation. As I show here, these interactions are not adequately explained or described in previous analyses. Chapter 6 will focus on this phenomenon, and will argue for the presence of a morphological phenomenon, agreement shift, that is not otherwise reported for Australian languages, and not reported in languages in general.

The description of incorporation phenomena furthermore (see §5.4), raises questions as to the relationship between incorporation as exhibited by Traditional Tiwi and that among other Australian languages. Incorporation phenomena of the various types that Tiwi possesses are described with respect to the cross-linguistic literature in chapter 7.

5.6 Summary

This chapter describes each templatic position in the Traditional Tiwi inflecting verb, and exemplifies it with data from the corpus. The analysis of some aspects of the verb presented in this chapter raises further questions.
CHAPTER 6

Agreement morphology

This chapter will describe morphological phenomena that are not otherwise reported in Australian languages, or in typologies of agreement and tense. There are two specific aspects of the Traditional Tiwi agreement system that are unusual. The first is that subjects themselves belong to inflectional classes that determine the choice of tense prefix. The second is the recruitment of tenses as agreement markers for covert objects. The latter of these is a phenomenon I call ‘agreement shift’, and as I show in §6.2.2, it involves the systematic shift of agreement, such that an entire agreement category switches from agreeing with one controller to another. Specifically, tense markers, which ordinarily agree with subject markers, are systematically shifted to agreeing with objects, depending on the morphosyntactic context.

These phenomena are central to the agreement system of Tiwi, and thus central to the entire grammar, yet were overlooked by previous descriptions, as they are obscured by the analysis of the subject bound pronoun paradigm (see §4.2.3.1). My analysis of the verb morphology, and specifically the simplification of the subject and tense marking system, as described in
detail in this chapter, draws attention directly to these phenomena and therefore requires that they be explained more adequately. The following sections do just that.

As shown in chapters 4 and 5, Traditional Tiwi is an exclusively head-marking language and lacks dependent marking. The verb is inflected for the person and number of both subject and object. There is no case marking of dependent noun phrases and no fixed word order with respect to subject and object noun phrases, and free pronouns have a constant form irrespective of their grammatical function. All information regarding the identity of the grammatical functions is therefore encoded by the clausal head – the verb – through agreement morphology.

Thus, the subject and object agreement prefixes, in positions –14 and –9 respectively, bear a huge amount of grammatical importance and, along with tense in position –13, are the only obligatory categories within the verb. The canonical system of subject, tense and object is exemplified in examples (237) and (238).

(237) \[ \text{purruminipumwari} \]
\[ \text{pi- rri- mini- umwari} \]
\[ 3\text{AUGS- PST- 1MINO- leave} \]
‘they left me here’ (AW_20120411_03:00:04:06)

(238) \[ \text{maningawu, nguminyjumwaram} \]
\[ \text{maningawu ngi- ø- minyi- umwari -ami} \]
\[ \text{grandmother 1MINS- NPST- 2MIN - leave -IPFV} \]
‘grandmother, I’m leaving you here’ (AW_20120411_03:00:05:40)

As described in this chapter, subject and object prefixes interact with tenses producing complex effects, such as the appropriation of tense markers to agree with objects for gender (see §6.2.2), and the seemingly unprincipled switching of gender marking for subjects and objects in certain contexts (see §6.2.3). These phenomena result in verbs taking agreement morphology that would not be expected on the basis of the bound subject pronoun paradigm that I propose (as described in §6.1).

For example, the subject/tense bound pronominal prefixes yi- and ji- ordinarily encode a masculine and feminine subject respectively. In (239) however, the bound pronouns appear to be reversed.
(239)  
\[ \text{gipakaluwunyi ngini jipakinya awunyirra} \]
\[ \text{yi- pakaluwunyi ngini ji- pakinya awunyirra} \]
\[ 3\text{MINS.M.PST- see COMP 3\text{MINS.F.PST- take DEM.F}} \]
\[ \text{‘she saw him, he stole it(f)’} \]
\[ \text{*‘he saw him/her, she stole it(f)’} \]

The bound pronoun \textit{yi-} ordinarily encodes a 3rd person minimal \textit{masculine} subject, and \textit{ji-} ordinarily encodes a 3rd person minimal \textit{feminine} subject. Here though, the first verb, \textit{pakaluwunyi ‘see’} is predicated of a feminine subject while the next verb \textit{akinya ‘take’} is predicated of a masculine subject. Note however that the object of \textit{pakaluwunyi} is masculine, and the object of \textit{akinya} is feminine. It appears that the subject agreement markers are actually agreeing with the objects.

I show in this chapter that verbs such as those in (239) are in fact the result of the overlap of two distinct phenomena: agreement shift and portmanteau subject/tense prefixes, and while they may appear to be complex, the underlying processes are actually fairly straightforward.

Another aspect of the Traditional Tiwi agreement system that will be detailed in this chapter is lexicalised agreement, wherein verb stems force agreement of a particular pattern. Lexicalised agreement is also a prominent feature in the agreement system of Mawng (Singer, 2006), which has a much more elaborated system than in Tiwi, due in part to there being five genders rather than two. §6.3 will look at lexicalised agreement in Traditional Tiwi and Mawng and point out some significant differences in the systems.

Throughout this chapter I use agreement terminology such as \textit{controller}, \textit{target}, \textit{domain} and \textit{feature}, as defined below by Corbett (2006).

We call the element which determines the agreement (say the subject noun phrase) the \textbf{controller}. The element whose form is determined by the agreement is the \textbf{target}. The syntactic environment in which agreement occurs (the clause for instance) is the \textbf{domain} of agreement. And when we indicate in what respect there is agreement, we are referring to agreement \textbf{features}.  

(\text{Corbett, 2006:4})

To illustrate this, in (240), the controller is the external nominal phrase ‘those young men’, and the target is the subject bound pronominal marker, which agrees with the controller for the features person and number. The domain in this case is the entire clause, and the features of agreement are person and number.
There are often multiple, overlapping instances of agreement occurring at any one time. For example in the above, there is agreement within the noun phrase *ampinayi malakaninguwi* ‘those young men’. The target, *ampinayi* ‘those’ agrees with the controller *malakaninguwi* ‘young men’ for number.

As this chapter describes and exemplifies, there are certain effects on the agreement system within the domain of the inflecting verb that result in a target shifting its agreement from one controller to another.

Before detailing the complex interaction between subject, object and tense marking, the next section will outline the canonical system of agreement in Traditional Tiwi.

### 6.1 Canonical agreement

I use the term ‘canonical agreement’ in the general sense, to refer to agreement that follows the standard, regular formulae as set out in §5.1 and as restated below. That is, agreement is canonical if the forms are predictable on the basis of the paradigms of subject bound pronouns, object bound pronouns, and tense markers. By contrast, agreement is non-canonical if the forms of the agreement and tense markers differ from the predictions based on the paradigms. As I show in this section, there are many cases of non-canonical agreement in Tiwi, but they are explained through a process I call ‘agreement shift’, in which some targets of agreement (for example, tense markers) shift in their controller (or, which grammatical function they agree with).

As shown in §5.1.1 and §5.2.1, the Traditional Tiwi subject pronoun paradigm is much less complex than the paradigm proposed by Osborne (1974:38), in which, as detailed in §4.2.3.1, some subject and tense combinations are treated as portmanteau morphemes that jointly determine both categories, while others are taken to be segmentable. I argue that the subject
pronouns and the tense markers can all be segmented, with a straightforward system of two subject classes needed to ensure that subject bound pronouns and tense markers combine correctly. Osborne’s (1974:38) paradigm, further elaborated by Lee (1987:173), is given in Table 31.

Table 31: Paradigm of fused subject/tense prefixes (Osborne, 1974:38; Lee, 1987:173)

<table>
<thead>
<tr>
<th>tense</th>
<th>subject</th>
<th>general</th>
<th>3MIN object</th>
<th>feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>NPST</td>
<td>1MIN</td>
<td>ngi-</td>
<td>ngi-</td>
<td>ngi-mpi</td>
</tr>
<tr>
<td></td>
<td>1/2MIN</td>
<td>mu-</td>
<td>mu-</td>
<td>mu-mpi</td>
</tr>
<tr>
<td></td>
<td>2MIN</td>
<td>nyi-mpi</td>
<td>nyi-</td>
<td>nyi-mpi</td>
</tr>
<tr>
<td></td>
<td>3MIN M</td>
<td>a-</td>
<td>a-</td>
<td>a-mpi</td>
</tr>
<tr>
<td></td>
<td>3MIN F</td>
<td>a-mpi</td>
<td>a-</td>
<td>a-mpi</td>
</tr>
<tr>
<td></td>
<td>1AUG</td>
<td>ngi-mpi</td>
<td>ngi-</td>
<td>ngi-mpi</td>
</tr>
<tr>
<td></td>
<td>1/2AUG</td>
<td>nga-</td>
<td>nga-</td>
<td>nga-mpi</td>
</tr>
<tr>
<td></td>
<td>2AUG</td>
<td>ngi-mpi</td>
<td>nyi-</td>
<td>nyi-mpi</td>
</tr>
<tr>
<td></td>
<td>3AUG</td>
<td>wu-</td>
<td>wu-</td>
<td>wu-mpi</td>
</tr>
<tr>
<td>PST</td>
<td>1MIN</td>
<td>ngi-ri-</td>
<td>ngi-ri-</td>
<td>ngi-nti</td>
</tr>
<tr>
<td></td>
<td>1/2MIN</td>
<td>mu-ri-</td>
<td>mu-ri-</td>
<td>mu-nti</td>
</tr>
<tr>
<td></td>
<td>2MIN</td>
<td>ji-</td>
<td>nyi-ri-</td>
<td>nyi-nti</td>
</tr>
<tr>
<td></td>
<td>3MIN M</td>
<td>yi-</td>
<td>yi-</td>
<td>ji-</td>
</tr>
<tr>
<td></td>
<td>3MIN F</td>
<td>ji-</td>
<td>yi-</td>
<td>ji-</td>
</tr>
<tr>
<td></td>
<td>1AUG</td>
<td>ngi-nti</td>
<td>ngi-ri-</td>
<td>ngi-nti</td>
</tr>
<tr>
<td></td>
<td>1/2AUG</td>
<td>nga-ri-</td>
<td>nga-ri-</td>
<td>nga-nti</td>
</tr>
<tr>
<td></td>
<td>2AUG</td>
<td>ngi-nti</td>
<td>nyi-ri-</td>
<td>nyi-nti</td>
</tr>
<tr>
<td></td>
<td>3AUG</td>
<td>pi-ri-</td>
<td>pi-ri-</td>
<td>pi-nti</td>
</tr>
</tbody>
</table>

One major reason that Osborne (1974:38) provides for analysing the subject and tense markers as portmanteau morphemes is the homophony that would pervade the paradigm if they were taken to be segmented from the tenses. For example, the 1st person minimal and augmented pronouns are both ngi-. However, there is still a large amount of homophony among the agreement prefixes if they are analysed as portmanteau with tense. The sequence ngi-nti- for example, corresponds to six distinct cells in the paradigm in Table 31: 1AUG past, 1AUG past acting on a 3MIN.F object, 1AUG past of a feminine verb, 1MIN past acting on a 3MIN.F object, 1MIN past of a feminine verb, and 2AUG past. Homophony is inevitable in a pronoun paradigm in which multiple subjects are represented by the same basic form, such as

---

42 I disagree with Osborne as to the form of the 2AUG past base pronoun. I argue instead that it is ngi- and thus fully in line with the rest of the 2nd person forms (see §5.1.1).
ngi- for all 1st person subject forms and is not a sufficient reason to choose one analysis over another, simpler one.

In addition, the larger paradigm, as in Table 31, specifying forms for each combination of subject, tense and object, obscures a range of interesting morphological phenomena, such as the categorisation of tense markers into inflectional classes, the use of these tense marker classes to agree with subjects and in some cases, object gender, lexicalised agreement, and the fusion of subjects with tense markers. Separating this single enlarged paradigm into two, the first listing the subject bound pronouns and the second listing the tenses, exposes these complexities and necessitates a full description of them.

This chapter shows how the paradigm in Table 31 can be simplified to the first column. The two middle columns, denoting the form of the subject and tense where the verb marks a 3rd person minimal object, can be eliminated from the paradigm altogether, as their forms are explained by regular a morphological process, agreement shift, described in §6.2.2. The final column moreover, denoting the form of the subject and tense where the verb is one of a small class of ‘feminine’ verbs, can similarly be eliminated from the system by appealing to lexicalised agreement (Singer, 2006), outlined in §6.3.

The simplified paradigms that I propose are given below in Tables 32 and 33.

Table 32: Traditional Tiwi subject bound pronouns (position –14)

<table>
<thead>
<tr>
<th>Number</th>
<th>Person</th>
<th>Class</th>
<th>Tense</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN</td>
<td></td>
<td></td>
<td>NPST</td>
</tr>
<tr>
<td>1</td>
<td>A</td>
<td></td>
<td>angi-</td>
</tr>
<tr>
<td>1/2</td>
<td>A</td>
<td></td>
<td>mu-</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td></td>
<td>nyi-</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
<td>M</td>
<td>a-</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>F</td>
<td>a-</td>
</tr>
<tr>
<td>AUG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>B</td>
<td></td>
<td>angi-</td>
</tr>
<tr>
<td>1/2</td>
<td>A</td>
<td></td>
<td>nga-</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td></td>
<td>nyi-</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
<td></td>
<td>wu-</td>
</tr>
</tbody>
</table>
Table 33: Traditional Tiwi tense markers (position –13)

<table>
<thead>
<tr>
<th></th>
<th>Class A</th>
<th>Class B</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPST</td>
<td>ø-</td>
<td>mpi-</td>
</tr>
<tr>
<td>PST</td>
<td>rri-</td>
<td>nti-</td>
</tr>
</tbody>
</table>

Object bound pronouns are marked in verbal position –9, several positions away from both subject and tense. As described in §5.1.2, my analysis of object and oblique bound pronouns is not significantly distinct from that of either Osborne (1974:27) or Lee (1987:180) apart from the fact that I analyse ng-initial forms as encoding irrealis mood, rather than being morphophonological variants of the m-initial forms. The object bound pronoun paradigm is provided below in Table 34.  

Table 34: Traditional Tiwi object bound pronouns (position –9)

<table>
<thead>
<tr>
<th>Person</th>
<th>Object</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Realis</td>
<td>Irrealis</td>
</tr>
<tr>
<td>1MIN</td>
<td>mini-</td>
<td>ngini-</td>
</tr>
<tr>
<td>1/2MIN</td>
<td>mani-</td>
<td>ngani-</td>
</tr>
<tr>
<td>2MIN</td>
<td>minyi-</td>
<td>nginyi-</td>
</tr>
<tr>
<td>3MIN</td>
<td>ø-</td>
<td></td>
</tr>
<tr>
<td>1AUG</td>
<td>muwuni-</td>
<td>nguwuni-</td>
</tr>
<tr>
<td>1/2AUG</td>
<td>mani-</td>
<td>ngani-</td>
</tr>
<tr>
<td>2AUG</td>
<td>mani-</td>
<td>ngani-</td>
</tr>
<tr>
<td>3AUG</td>
<td>wuni-</td>
<td></td>
</tr>
</tbody>
</table>

Canonical agreement occurs where the verb is marked using regular subject, object and tense markers from these three paradigms. In the sentences below, for example, subject, object (if required by the verb) and tense are all represented by distinct morphemes, and their forms are accurately predicted by the paradigms in Tables 32 to 34, particularly with respect to the selection of the correct tense marker, as determined by the subject’s class feature.

(241)  
nyimpunuwujana
nyi- mpi- wuni- wij =ana
2MINS- NPST- HITH- go =Q
‘are you coming here?’  
(AW_20120411_02: 00:36:33)

43 Oblique forms are realised in the same position, but are not pertinent to the discussion here and are not shown in Table 34.
(242)  *purruminipumwarri*
pu- rri- mini- pumwari
3AUGS- PST- 1MINO- leave
‘they left me (here)’  (AW_20120411_03: 00:04:02)

There are, however, significant complexities in the agreement system that require a full explanation. For example, the paradigms in Tables 32 and 33 show that both subjects and tenses are specified for Class, either A or B. Furthermore, Table 34 shows that 3rd person minimal objects have zero exponence.

### 6.2 Interactions

Complex behaviour of the Traditional Tiwi bound pronouns results from the interaction between the three obligatory verbal affixes: subject, object, and tense. The following sections outline the interactions between subject and tense, between object and tense, and finally, between all three affixes.

#### 6.2.1 Subject and tense

There are two significant interactions between subject marking and tense marking that have an effect on the grammar. Firstly, subject markers belong to classes, with which the tense markers must agree, and secondly, some subject markers are fused with past tense to form portmanteau morphemes.

##### 6.2.1.1 Subject Classes

As shown in Tables 32 and 33 above, both subject agreement markers and tense affixes are specified as to membership of one of two inflection classes; A or B. The subject bound pronoun is the controller, as it determines the agreement, and the tense marker is the target, as it is the element whose form is determined by the agreement. The domain of agreement in this case is limited to the inflecting verb itself, and the feature that is being agreed for is Class.
The subject pronouns must combine with the tenses of the appropriate tense class in order for the verb to be grammatical. Thus a 2nd person subject, which is of Class B, must occur with a tense marker from Class B, as shown in example (243).

\[(243) \quad \text{maka nyimpija} \]
\[
\text{maka nyi- mpi- wija} \\
\text{where 2- NPST(B)- go} \\
\text{‘where are you going?’} \quad (AW_20120411_01: 00:44:50)
\]

In some cases, the value for class can disambiguate between homophonous subjects. In the two examples below, the tense marker indicates whether the subject is minimal number or augmented number. Both 1MIN and 1AUG subjects are represented by the base pronoun ngi-. They differ only with respect to the inflection class to which they belong; Class A denotes a minimal 1st person subject, as in (244), and Class B denotes an augmented 1st person subject, as in (245).

\[(244) \quad \text{ngurratupangimpari} \]
\[
\text{ngi- rri- watu- angimpari} \\
1- PST(A)- MORN- wake \\
‘I woke up in the morning’ \quad (AW_20120411_03: 00:17:11)
\]

\[(245) \quad \text{nguntuwatulimpangapa} \]
\[
\text{ngi- nti- watu- limpangi- apa} \\
1- PST(B)- MORN- meat- eat \\
‘we ate together in the morning’ \quad (AW_20120411_03: 00:14:43)
\]

Similarly, the only way to indicate the contrast between a masculine and a feminine 3MIN subject in non-past-tense forms\(^{44}\) is by the Class value of the tense marker; Class A for masculine, as in (246) and Class B for feminine, as in (247).

\[(246) \quad \text{aminiwunjungunyunkwi} \]
\[
\text{a- ø- mini- wunjingu- winyunkwi} \\
3MIN- NPST(A)- IMINO- DUR- await \\
‘he’s waiting for me’ \quad (AW_20120413_01: 00:52:49)
\]

\[(247) \quad \text{ampuwunjimajirripi} \]
\[
\text{a- mpi- wunjingu- majirripi} \\
3MIN- NPST(B)- DUR- sleep \\
‘she’s sleeping’ \quad (AW_20120307_01: 00:00:56)
\]

\(^{44}\) Masculine and feminine 3MIN forms are distinct in past tense.
Other subject markers are unique and do not require the Class attribute of the tense marker to disambiguate between them. For example, *mu*- can only refer to 1/2MIN, ‘you and me’, and *nga*- can only refer to 1/2AUG ‘we (inclusive)’. However, they also must agree with the tense marker. Both are Class A as shown in (248) and (249).

\[(248)\] muwa murrwapa awurlagha  
muwa mu- rri- apa awurlagha  
1/2MIN 1/2MIN- PST(A)- eat yesterday  
‘we two ate yesterday’ (CO_707A: 00:18:46)

\[(249)\] ngawa ngawija  
ngawa nga- ø- wijia  
1/2AUG 1/2AUG- NPST(A)- go  
‘we (incl) are going’ (CO_707A: 00:02:09)

The fact that both 1/2MIN and 1/2AUG belong to the same subject class means that in the case of 1/2 persons, the class category does not serve any practical purpose in disambiguating one subject from another. It highlights the fact that all of the subject pronouns are obligatorily specified as to their membership of Class A or B for the purpose of agreement with tense marking. This point is further corroborated by the fact that the second person pronouns, all of which have the same form *nyi*,\(^{45}\) are all Class B and as such, the Class attribute does not help to differentiate between them.

The facts presented above show that the Class attribute of the tense markers is not related to any semantic categories; tense classes do not relate to the number, person or gender of the subject. They are entirely arbitrarily assigned.

### 6.2.1.2 Portmanteau forms

The other interaction between subject and tense is that, for some combinations, both are marked together as a single portmanteau morpheme. Most subject agreement markers have a constant form irrespective of tense. The 1/2MIN subject marker for example is always *mu*-:

\(^{45}\) The second person minimal pronoun is fused with past tense marking, producing the portmanteau form *ji*-, however the fused form is blocked in cases where agreement shift occurs and *ngi* occurs instead (see §6.2.3). This further confirms the fact that *ngi* is the basic underlying 2nd person pronoun.
2MIN and both 3MIN masculine and feminine pronouns however, are fused with their respective past tense markers. In these cases, a tense marker from position –13 does not additionally occur; the fused subject-tense morpheme satisfies both categories and occupies both verbal positions. The examples below illustrate each pronoun in its basic form (a), and in its portmanteau form (b).

(250)  
\( \text{muwa muwu} \text{jungumangapa} \)  
\( \text{muwa ~} \text{mu-} \text{wunjingu-} \text{mangapa} \)  
1/2MIN 1/2MIN- NPST(A)- DUR- drink  
‘you and me are drinking’  
(CO_707B: 00:54:57)

(251)  
\( \text{muwa waya murrimangapa} \)  
\( \text{muwa waysa mu- rri- mangapa} \)  
1/2MIN NFUT 1/2MIN- PST(A)- drink  
‘you and me drank’  
(CO_708A: 00:12:08)

(252a)  
\( \text{nyipuwujungumuwu} \)  
\( \text{nyi- mpi- wunjingu- muwu} \)  
2MIN- NPST(B)- DUR- sit  
‘you are sitting’  
(CO_700B: 00:39:15)

(252b)  
\( \text{nginja jimuwu} \)  
\( \text{nginja ji- muwu} \)  
2MIN 2MIN.PST- sit  
‘you sat’  
(CO_700B: 00:18:02)

(253a)  
\( \text{awunjingumangapa} \)  
\( \text{a-} \text{wujingu- mangapa} \)  
3MIN.M- NPST(A)- DUR- drink  
‘he is drinking’  
(CO_707B: 00:53:47)

(253b)  
\( \text{yimangapa} \)  
\( \text{yi- mangapa} \)  
3MIN.M.PST- drink  
‘he drank’  
(CO_708A: 00:11:25)

(254a)  
\( \text{nyirra ampuwunjinguwunyirri} \)  
\( \text{nyirra a- mpi- wunjingu- wunyirri} \)  
3MIN.F 3MIN.F- NPST(B)- DUR- wash  
‘she is washing’  
(CO_707B: 00:42:07)

(254b)  
\( \text{nyirra jiwu} \text{nyirri} \)  
\( \text{nyirra ji- wunyirri} \)  
3MIN.F 3MIN.F.PST- wash  
‘she washed it’  
(CO_708A: 00:02:19)
The 3AUG past tense form *pi*- also differs from the non-past tense form *wu-*, although the reason is slightly different. It stands apart from the portmanteau forms listed above in that it takes the tense marker *rr*- as in (255b), and as such, *pi*- is not a portmanteau form, but a suppletive form of the subject used in past tense-inflected verbs.

(255a)  
\[\text{wuta } \text{wuwunjingamangapa}\]  
\[\text{wuta } \text{wu-} \text{-wunjingu- mangapa}\]  
\[\text{3AUG } \text{3AUG-} \text{NPST(A)- DUR- drink}\]  
\[\text{’they are drinking’}\]  
\[(CO\_707B: 00:56:39)\]

(255b)  
\[\text{wuta waya pirrimangapa}\]  
\[\text{wuta waya } \text{pi- rr- mangapa}\]  
\[\text{3AUG NFUT 3AUG(PST)- PST(A)- drink}\]  
\[\text{’they drank’}\]  
\[(CO\_708A: 00:14:02)\]

The difference between the non-past *wu-* and the past form *pi-* of this pronoun are not due to fusion as with the others, but to the lenition of the non-past form. I argue that *pi*- is the conservative form and *wu-* is the innovation, which is due to lenition of the *p* to *w.*

This is further corroborated by Harvey’s (2003) reconstruction of proto-non-Pama-Nyungan subject bound pronouns, in which 3AUG is reconstructed as *pV-rrV*- (see §2.2.2).

6.2.2 Object and tense

In addition to agreeing with subject pronouns for inflectional class, the tense markers serve another purpose: they encode the gender of a 3rd person minimal object, although not at the same time. Depending on the morphosyntactic environment, the tense markers either agree with the subject for class, or they agree with the object for gender. I refer to this phenomenon as agreement shift, in that the controller of agreement of the tense marker shifts from the subject (with which it agrees for Class) to the object (with which it agrees for person, number and gender).

Objects are marked on the verb in position –9 (see §5.1.2). They show the same person, number and gender distinctions as all other pronouns, both bound and free (see §4.2.2.1). In addition, objects encode mood, with *m*-initial forms being used in realis clauses, and *ng*-initial

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46 The change of vowel is due to a regular sound change in Traditional Tiwi.
forms being used in irrealis clauses. The paradigm of object bound pronouns is given above in Table 34.

A verb that requires an object will mark it with one of the object markers. The verbs *pujirri* ‘cover’ and *pakitiringa* ‘throw’, for example, require an object in addition to a subject.

(256) *kakirijuwi ngimpuwunipujirri*
    kakirijuwi     ngi- mpi- *wuni*- pujirri
    small.PL   1AUGS- NPST- **3AUGO**- cover
    ‘we cover the children (from the wind)’
    (Lee, 1993:240)

(257) *yiminipakatiringa*
    yi- **mini**- pakitiringa
    3MINS.M.PST- **1MINO**- throw
    ‘he threw me’
    (AW_20120413_01: 00:57:45)

3rd person minimal objects, as shown in Table 34, have zero-exponence in the object/oblique position. A transitive verb without an overt object marker is thus taken to have a 3rd person minimal object, as shown in (258) and (259) below.

(258) *awunjupujirri*
    a- wunjingu- ø- pujirri
    3MINS.M.NPST- DUR- **3MINO**- cover
    ‘he’s covering it’
    (CO_700B: 00:40:58)

(259) *yipakatiringa*
    yi- ø- pakitiringa
    3MINS.M.PST- **3MINO**- throw
    ‘he threw him’
    (AW_20120411_01: 00:11:17)

While a 3MIN object has zero-exponence in the object bound pronoun paradigm, the presence of such an object can be observed in the effect it has on the tense markers. Ordinarily, as shown in Tables 32 and 33 (§6.1), the two classes of tense markers encode information relating to the subject. A 1MIN subject will take tense markers from Class A (260 and 261) while a 1AUG subject will take tense markers from Class B (262 and 263).

(260) *nguwuja*
    ngi- ø- wuja
    1MIN- NPST(A)- go
    ‘I am going’
    (CO_707A: 00:00:37)
(261)  ngurrupakupawurli
    ngi- rri- akupawurli
    1MIN- PST(A)- return
'I went back' (CO_700B: 00:24:23)

(262)  ngumpija
    ngi- mpi- wuja
    1AUG- NPST(B)- go
'we’re going' (CO_707A: 00:02:38)

(263)  ngintipakupawurli
    ngi- nti- akupawurli
    1AUG- PST(B)- return
'we went back' (CO_700B: 00:26:37)

Where there is a 3rd person minimal object, the tense marker no longer agrees with the
subject pronoun for class; it instead agrees with the object for gender. Class A tense markers
encode masculine objects (264 and 266) while Class B markers encode feminine objects (265
and 267). Moreover, as these examples demonstrate, this is similarly the case for both non-
past tense inflected verbs (264 and 265), and past tense inflected verbs (266 and 267).

(264)  ngagha ngiripirni
    ngagha  ngi- ø- ri- ø- pirni
    1AUG  1AUGS- NPST(O:M)- ?- 3MINO- hit
'we are going to hit him' (CO_707A: 00:45:03)

(265)  ngiya ngumpiripirni
    ngiya  ngi- mpi- ri- ø- pirni
    1MIN  1MINS- NPST(O:F)- ?- 3MINO- hit
'I are going to hit her' (CO_707A: 00:29:44)

(266)  ngurrwunganga
    ngi- rri- ø- wunga
    1AUGS- PST(O:M)- 3MINO- grab
'we grabbed him' (CO_700B: 00:26:27)

(267)  nguntupapunya
    ngi- nti- ø- papunya
    1MINS- PST(O:F)- 3MINO- follow
'I followed her' (CO_700B: 00:29:18)

This shift of agreement controller however, is not without cost. Recall from §6.2.1.1 that some
subject pronouns are ambiguous and require the Class attribute of the tense markers to
resolve them. Recruiting the Class attribute of the tense markers to encode object gender
therefore results in the potential ambiguity of some of the subject pronouns. Examples (266) and (267) above, are ambiguous as to the number of the subject; each could equally denote a 1MIN or 1AUG subject. The only means of disambiguating the subject is to utilise a free pronoun, as shown in (264) and (265).

Agreement shift is restricted to transitive verbs in which the object is 3MIN; where the object has no overt representation in the object verb position. The presence of an overt object marker thus precludes this phenomenon, and the verb instead exhibits canonical agreement, in which the tense marker encodes information relating to the subject. For example, in (268) and (269), the presence of an overt object prevents agreement shift from taking place, and the verb instead agrees canonically.

(268) \[\text{ngurruwuntapunya}\]
\[\text{ngi- rri- wuni- papunya}\]
1MIN- PST(\(A\))- 3AUGO- follow
‘I followed them’
(CO_700B: 00:29:36)

(269) \[\text{ngagha nguntuwuntampunya apinayi yuwurrara}\]
\[\text{ngagha ngi- nti- wuni- papunya apinayi yuwurrara}\]
1AUG 1AUGS- PST(\(B\))- 3AUGO- follow DIST.PL two
‘we followed those two’
(CO_700B: 00:37:54)

That agreement shift does not take place in these cases also means that the tense markers revert to agreeing with the subjects for class.

6.2.3 Subject, object and tense

Under agreement shift, the tense marker is employed to encode the gender of a 3MIN object. As described in §6.2.1.2, some subjects are portmanteau with past tense marking. As a result, a conflict emerges when the grammar needs to recruit the tense marker to encode an object, but no segmentable tense marker is available due to it being fused with the subject. The overlap of agreement shift and portmanteau subjects therefore adds another layer of complexity to the Traditional Tiwi agreement system. As this section shows, there are two different solutions employed by the grammar; one solution for 2nd person minimal subject...

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47 The gloss given for each reflects the stimulus.
forms and the other for 3rd person minimal subject forms. The following sections will detail both solutions.

6.2.3.1 2MIN subjects

Under canonical agreement, subject and tense markers occupy distinct affix positions and are segmentable. For example, as illustrated in (270), the subject marker, nyi- 2MIN, is separable from the non-past tense marker mpi-. However, for the past tense of some subjects, the subject marker and the tense combine to form a portmanteau morpheme. As shown in (271), 2nd person minimal is portmanteau with past tense marking, and is encoded by a single morpheme ji- which occupies both subject and tense verbal positions.

(270) nginja nyimpuwunjungumuwu
     nginja nyi- mpi- wunjingu- muwu
   2MIN 2MIN- NPST- DUR- sit
   ‘you are sitting down’ (CO_700B: 00:39:49)

(271) nginja jimuwu
     nginja ji- muwu
   2MIN 2MIN.PST- sit
   ‘you sat down’ (CO_700B: 00:18:02)

This is problematic when the grammar needs to encode a 2MIN subject and a 3MIN object in past tense. The presence of the 3MIN object would ordinarily trigger agreement shift, whereby the tense marker is used to encode the gender of the object. Here though, the tense marker is phonologically fused with the subject, and thus unavailable for this purpose. This conflict highlights the mutual exclusivity of the two functions of the tense markers; they cannot serve both functions at the same time.

The solution is to override the fused, portmanteau form of the subject-tense markers and instead use the regular 2nd person subject marker nyi- along with an overt tense marker. The choice of the tense marker is then determined by the gender of the object (see §6.2.2), as illustrated in (272), for a masculine object, and (273), for a feminine object.

(272) nyirripapunya
     nyi- rri- ø- apunya
   2S- PST(OM)- 3MINO- follow
   ‘you followed him’ (CO_700B: 00:30:35)
The expected past tense form of the 2MIN subject is *ji-, which is homophonous with the 3MIN feminine past tense form. However where *ji- marks a transitive verb such as apunya ‘follow’, it cannot indicate a 2nd person subject. Instead, it indicates a 3rd person subject, although it has also undergone a more extreme instance of agreement shift, which will be described in the next section. It is important to note that (274) is ungrammatical if the intended subject is 2nd person.

The use of the non-portmanteau forms of the subject and tense markers is restricted to verbs that exhibit agreement shift – those that encode 3MIN, zero-marked objects. All other objects, which have overt morphological representation, do not trigger this phenomenon: the 2MIN subject and tense revert to being encoded jointly by a portmanteau morpheme. Examples (275) and (276) below, in which an overt object marker is present, illustrate this.

The use of separable subject bound pronoun and tense marking is therefore not determined by the transitivity of the verb or the presence of an object itself; it is determined solely by the presence of a 3rd person minimal object. Inflecting verbs in all other morphosyntactic contexts, that is, where the object has overt exponence or where the verb is intransitive, exhibit canonical agreement.
6.2.3.2 3MIN subjects

As with the 2nd person minimal subjects, 3rd person minimal subjects are portmanteau with past tense marking. The behaviour of the 3MIN subjects, however, differs from 2MIN with respect to the interaction with agreement shift, and the solution to the problem posed by the unavailability of tense markers to encode 3MIN objects.

Where a portmanteau 3MIN subject-tense marker occurs with a 3MIN object, that is, where agreement shift comes into conflict with a portmanteau subject/tense prefix, the grammar employs a very different solution that allows both phenomena to simultaneously occur. As described below, this workaround results in the seemingly unsystematic agreement effects exemplified in the introduction to this chapter, in example (239); the apparent switch of subject and object marking.

Similar to the 2MIN forms, the 3MIN subject pronouns combine with past tense markers to form portmanteau morphemes. The marker yi- encodes a 3MIN masculine subject and past tense, as in (279), while ji- encodes a 3MIN feminine subject and past tense, as in (280). The non-past tense forms are not fused, but note that the 3MIN subject pronoun is the same for masculine and feminine, although they belong to different inflectional classes and thus take different non-past tense markers, as shown in (277) and (278).

(277)  awujingapa
      a- ø- wunjingu- apa
3MIN- NPST(A)- DUR- eat
   ‘he is eating’                   (CO_707A: 00:14:03)

(278)  ampuwujiangapa
      a- mpi- wunjingu- apa
3MIN- NPST(B)- DUR- eat
   ‘she is eating’                (CO_707A: 00:14:24)

The fact that the masculine 3MIN subject form is denoted by the Class A tense markers while the feminine is denoted by Class B tenses is interesting, given than this corresponds exactly to the patterning of the tenses with respect to the marking of 3MIN object gender, as shown below.
Past tense forms, as in (279) and (280), differ from non-past forms in that they are fused with tense, but have different forms depending on the gender of the subject.

(279)  
\textit{yuvapa awurlagha}  
yi- apa  awurlagha  
\textit{3MINS.M.PST- eat yesterday}  
‘he ate yesterday’  
\textit{(CO\_707A: 00:17:57)}

(280)  
\textit{juwapa awurlagha}  
ji- apa  awurlagha  
\textit{3MINS.F.PST- eat yesterday}  
‘she ate yesterday’  
\textit{(CO\_707A: 00:18:26)}

Where a 3rd person minimal object is present, the tense marker is again recruited to agree with the object for gender. So for the non-past tense forms, the tense markers ø- and mpi- no longer denote the class of the subject, they instead denote a masculine and feminine 3MIN object respectively, and 3MIN subjects consequently become ambiguous.  

(281)  
\textit{ngarra aripirni}  
ngarra  a- ø- ri- ø- pirni  
\textit{3MIN.M  3MINS- NPST(O:M)- ?- 3MINO- hit}  
‘he’s going to hit him’  
\textit{(CO\_707A: 00:33:46)}

(282)  
\textit{ngarra ampiripirni}  
ngarra  a- mpi- ri- ø- pirni  
\textit{3MIN.M  3MINS- NPST(O:F)- ?- 3MINO- hit}  
‘he’s going to hit her’  
\textit{(CO\_707A: 00:33:59)}

(283)  
\textit{nyirra aripirnami}  
nyirra  a- ø- ri- ø- pirni -ami  
\textit{3MIN.F  3MINS- NPST(O:M)- ?- 3MINO- hit -IPFV}  
‘she’s going to hit him’  
\textit{(CO\_707A: 00:36:41)}

(284)  
\textit{nyirra ampiripirnami}  
nyirra  a- mpi- ri- ø- pirni -ami  
\textit{3MIN.F  3MINS- NPST(O:F)- ?- 3MINO- hit -IPFV}  
‘she’s going to hit her’  
\textit{(CO\_707A: 00:37:02)}

The gender of the subject can then only be indicated, as in the above, by the use of an optional free pronoun \textit{ngarra} ‘he’ or \textit{nyirra} ‘her’.

\footnote{The presence of ri- remains unexplained in these examples, however as it is present in both masculine and feminine forms, it does not affect the analysis. Lee (1987) treats this and several other meaningless morphemes like it, as connectives. Connectives were not a focus of mine and I therefore remain agnostic.}
3MIN past tense forms are further complicated by the fact that, as portmanteau forms, the tense marker is unavailable to mark the object. Instead, a single monosyllabic morpheme simultaneously encodes the person and number of the subject, the gender of the object, and the tense. Importantly, these forms are ambiguous as to the gender of the subject.\footnote{The fact that the subjects in (285) through (288) are specified as to gender in the glosses is due to the fact that the glosses reflect the stimulus.}

\[(285)\]
\begin{verbatim}
gipapunya \\
yi- ø- apunya \\
3MIN.S.PST(O:M)- 3MINO- follow \\
‘he followed him’
\end{verbatim}

\[(286)\]
\begin{verbatim}
jipapunya \\
ji- ø- apunya \\
3MIN.S.PST(O:F)- 3MINO- follow \\
‘he followed her’
\end{verbatim}

\[(287)\]
\begin{verbatim}
gipapunya \\
yi- ø- apunya \\
3MIN.S.PST(O:M)- 3MINO- follow \\
‘she followed him’
\end{verbatim}

\[(288)\]
\begin{verbatim}
jipapunya \\
ji- ø- apunya \\
3MIN.S.PST(O:F)- 3MINO- follow \\
‘she followed her’
\end{verbatim}

Whereas \textit{yi}- ordinarily encodes a masculine subject, in (285) the subject is unspecified for gender. Similarly for \textit{ji}- in (286). The target of agreement, the tense marker, has remained constant, but the controller and the feature for which it agrees have both changed. The controller is now the object rather than the subject, and the feature for which it agrees is gender, rather than class.

Example (289) concisely illustrates both canonical agreement as well as this most extreme case of agreement shift. The first two verbs have the same subject, 3rd person minimal feminine, although only the first verb, \textit{angimpari} ‘wake’ actually encodes this. The other verb, \textit{akaluwunyi} ‘see’, is ambiguous as to the gender of the subject as its masculine subject marker \textit{yi}- now encodes the gender of the object instead. The third verb, \textit{akinya} ‘steal/take’ is being predicated of a masculine subject, whereas the object – the elided guitar, which is
grammatically feminine – requires the verb to take the feminine subject marker, as it is the controller of agreement in this case.

(289)  
\[
\begin{array}{ll}
jipangimpari, & yipakaluwunyi ngini, jipakinga awunyirra \\
ji- & yi- \text{-akaluwunyi} \\
3\text{MIN.F.PST.-} & 3\text{MINS.PST(O:M)-} 3\text{MNO-} \text{see} \\
gini & ji- \text{-akinya} & \text{awunyirra} \\
\text{COMP} & 3\text{MINS.PST(O:F)-} & 3\text{MNO-}\text{ steal} & \text{DEM.F} \\
\end{array}
\]
‘she woke up and saw him stealing (the guitar)’

In other words, where both subject and object are 3rd person minimal, the form of the agreement affixes themselves is not affected, but what determines the choice of agreement affixes has been changed. Where the subject was previously the controller of the subject bound pronoun, in these extreme examples of agreement shift, the object has become the controller.

Similarly with all other instances of this phenomenon, the presence of morphologically overt objects blocks agreement shift from occurring. The presence of an overt object means that the grammar does not recruit the gender of the subject marker to encode the gender of the object, and agreement reverts to being canonical. As such, examples (290) through to (293) below are not ambiguous as to the gender of the subject.

(290)  
\[
\begin{array}{ll}
aminipirni & \\
a- & \text{mini-} \text{pirni} \\
3\text{MINS-} \text{NPST(A)-} & 1\text{MNO-} \text{hit} \\
\end{array}
\]
‘he (*she) is going to hit me’

(CO_707A: 00:33:14)

(291)  
\[
\begin{array}{ll}
ampuminipirni & \\
a- & \text{mpi-} \text{pirni} \\
3\text{MINS-} \text{NPST(B)-} & 1\text{MNO-} \text{hit} \\
\end{array}
\]
‘she (*he) is going to hit me’

(CO_707A: 00:36:05)

(292)  
\[
\begin{array}{ll}
giminipirni & \\
yi- & \text{mini-} \text{pirni} \\
3\text{MINS.M.PST-} & 1\text{MNO-} \text{hit} \\
\end{array}
\]
‘he (*she) hit me’

(CO_707A: 01:02:07)

(293)  
\[
\begin{array}{ll}
jiminipirni & \\
ji- & \text{mini-} \text{pirni} \\
3\text{MINS.F.PST-} & 1\text{MNO-} \text{hit} \\
\end{array}
\]
‘she (*he) hit me’

(CO_707B: 00:02:10)
This highlights the fact that it is entirely the presence of either a 3MIN object specifically that triggers agreement shift, rather than simply any object. This phenomenon is therefore not an effect of transitivity or absolutive marking.

In summary, agreement shift is not just the appropriation of a single morpheme to encode an additional feature; it is the systematic refunctionalisation of an entire category of the verb. Tense markers in Tiwi exist in two classes, the choice between which is determined by the class membership of the subject agreement markers themselves. However the bond between subject agreement markers and tense is broken when a 3rd person minimal object is present. The object hijacks the tense marker, and uses it to encode its gender. This does not happen to individual tense morphemes; it happens to the entire paradigm of tense markers; the entire templatic slot. Furthermore, if tense markers are not present, where the subject is 3rd person minimal and is portmanteau with the tense marker, for example, then the object hijacks the subject marker instead, using its gender feature to encode the gender of the object.

This phenomenon is not reported in any typology of tense, agreement or morphology (Comrie, 1985; Dahl, 1985; Binnick, 2012; Corbett, 1991, 2006). The literature does not discuss any instances whereby agreement affixes can switch from being controlled by one grammatical function to another, depending on the morphological environment.

Within Australian languages in particular, such phenomena as I describe herein for Traditional Tiwi are not otherwise reported. The position in the template of the tense marker in Tiwi is itself unusual for Australian languages, as tense is usually marked as a suffix to the verb stem or, in the case of some northern Australian languages, such as Wagiman (S Wilson, 1999), Murrinh-Patha (Nordlinger, 2010) and Bininj Gun-Wok (Evans, 2003), tense is marked through a combination of prefixes and suffixes. Tense in Tiwi is only marked as a prefix. Gooniyandi is perhaps the only other Australian language that encodes tense as a prefix (McGregor, 1990:3). Traditional Tiwi is further unusual in that there is agreement between the tense marker and the subject and object agreement markers. There are many examples of Australian languages, particularly among Pama-Nyungan languages, of verb stems themselves existing in verb classes that determine the form of the tense markers (Dixon, 1980:382-85; 2002:215-24), but there are no reports of agreement systems in which the subject markers exist in classes that determine the form of the tense marker.
With respect to agreement shift, there is one potentially similar phenomenon in Murrinh-Patha, in which a single number marking position can encode either subject or object number, depending on the morphological context, specifically on the form of the classifier verb stem and the object marker (Nordlinger, 2010:336). Examples (294) and (295) below illustrate this.

(294) Murrinh-Patha:
\[\text{dainingiriwakthanginthadharra}\]
dani-ngi-riwak-dha-\text{ngintha-dharra}
\[3\text{SG.POKE(19).P:IPFV-1SGO-follow-P:IPFV-DU.F-moving}\]
‘the dual non-siblings were following me’ (Nordlinger, 2010:336)

(295) Murrinh-Patha:
\[\text{parraningankuriwakthanginthadharra}\]
parrani-nganku-riwak-dha-\text{ngintha-dharra}
\[3\text{PLS.POKE(19).P:IPFV-1DU/PCO-follow-P:IPFV-DU.F-moving}\]
‘they were following us (dual non-siblings)’ (Nordlinger, 2010:336)

The number marker -\text{ngintha} ‘dual non-sibling’ in these examples can mark either subject or object, depending on whether or not the subject and object are of compatible numbers themselves. So in (294), the subject is listed as singular, which allows combination with the dual number marker, whereas a plural subject, as in (295), does not allow combination with the dual number, and so -\text{ngintha} must mark the object instead.

Nordlinger (2010:336) treats this number marking position not as either subject or object number, but rather as an unspecified ‘argument number’. Whether it encodes subject or object will depend on the permissibility of the combination of the number marked in this position, and the number encoded by the ‘classifier stem’, such as \text{dani-} and \text{parrani-} in the above examples. For example, a classifier stem that marks plural subject cannot combine with either a dual or a paucal number marker, and therefore the number marker can only refer to the object. The full list of possible number combinations is provided by Nordlinger (2010:327).

While there is a similarity between this phenomenon and agreement shift as I have presented it in Tiwi, there are also considerable differences. They are similar in that they both involve a single templatic position switching between encoding subject and object. In Murrinh-Patha, the switch is conditioned by combinatorics; the permissible combination of two markers that encode the same category, while in Tiwi, the switch is conditioned by the presence of a 3rd person minimal object. This means that in Tiwi, there are no cases in which the tense marker
can encode either subject class or object gender; it is always clearly and unambiguously one or the other. In Murrinh-Patha, it is possible for the number marker to be compatible with either subject or object, in which case it becomes ambiguous.

To summarise, the number marker in Murrinh-Patha is unspecified as to which argument it encodes, so it is not shifting from one argument to another, but instead, gaining its specification from other constraints (in this case combinatorics of number values). Whereas in Tiwi, the tense marker does in fact shift from one argument to another. If there is a 3rd person minimal object, the tense marker encodes its gender. If there is no 3rd person minimal object (for example, if there is another object, or if the verb is intransitive) then the tense marker agrees with the class of the subject.

6.3 Lexicalised agreement

Another complication exhibited by Traditional Tiwi verbal agreement morphology is lexicalised agreement, which is ‘the lexicalisation of otherwise productive verbal agreement morphology’ (Singer, 2006:4).

The full paradigm of subject and tense markers given by Osborne (1974:38), followed by Lee (1987:173) and given in Table 31, contains a column labelled ‘feminine’. This column denotes the form of the subject and tense affixes where the verb stem is one of a closed set of ‘feminine’ verbs.

It is immediately evident from the paradigm that the forms of the subject and tense markers used when the verb is of the ‘feminine’ class are identical to the subject and tense affixes when the verb encodes a 3rd person minimal feminine object. Thus feminine verb stems force agreement in subject and tense prefixes as though the verbs encode 3MIN.F objects, irrespective of the actual gender, or even the presence, of an object. The inflectional paradigms that I present in §6.1, along with the use of tense markers to encode the gender of 3MIN objects (§6.2.2), are together sufficient to account for the form of the subject and tense affixes when the verb is from the feminine class. What is not accounted for however, is how a verb stem can force the agreement system to behave as though a 3MIN.F object is present when no such object exists.
The ‘feminine’ class includes verb stems such as *wunyirri* ‘wash’, *pumuti* ‘light (a fire)’, *kupuri* ‘shoot/throw’ and *kuruwala* ‘sing’. They show no particular patterning in terms of any semantic or grammatical features, including valency, and thus do not form a natural class distinct from other verbs, apart from this behaviour. These are exemplified below in (296) through to (299).

(296)  
ngarra juwaturuwunyirri  
nagarra ji- watu- ru- ø- wunyirri  
3MIN.M 3MINS.PST(OF)- MORN- ?- 3MINO- wash  
‘he washed it in the morning’ (CO_708A: 00:22:41)

(297)  
ngintupumuti yikwani  
ngi- nti- ø- pumuti yikwani  
1MINS- PST(OF)- 3MINO- light fire(M)  
‘I lit a fire’ (Lee, 1987:157)

(298)  
inaki yilati ngumpungunjukupuri  
inaki yilati ngi- mpi- nginji- kupuri  
PROX.M knife(M) 1MINS- NPST(OF)- 2MINOBL.IRR- shoot  
‘I’m going to stab you with this knife’  
lit ‘I am going to shoot this knife at you’ (AW_20120411_01: 00:23:07)

(299)  
ampujirrayakuruwalamami  
a- mpi- irraya- kuruwala -mami  
3MINS- NPST(OF)- walk_ along- sing -IPFV  
‘he’s walking along singing’ (AW_20120411_01: 00:56:05)

It is clear from the above examples that the regular predicted agreement patterns do not apply to feminine verbs. These verbs agree for a 3MIN feminine object if the verb is transitive yet no object is expressed, as in (296), if an object is expressed but is masculine, as in (297) and (298), or if the verb is monovalent, as in (299).

A potential explanation for this behaviour is that feminine verbs were, in an earlier form of the language, restricted to taking certain entities as their objects. This view is corroborated by looking at some examples of feminine verbs and noting that they often collocate with particular objects. The verb stem *kurungi* ‘stop bleeding, clot, (with ashes)’, as shown in (300), often collocates with the feminine nominal *pumutinga* ‘ashes’ which are used as a clotting agent. Another example, shown in (301), is that the verb *kupuri* ‘shoot’ often collocates with a particular type of spear; *kulunjila* ‘wallaby spear’, which is grammatically feminine.
(300)  *pumutinga pintirikurungani*

*pumutinga*  pi-nti-ri-o-kurungi-ani

*ashes*(F)  3AUG- PST(O:F)-?3MINO- clot-ITER

‘they stopped the bleeding with ashes’  (Lee, 2011)

(301)  *pintimukupurani jupwajirringa awinyirra kulinjila*

pi-nti-mi-kupuri-ani  jupwajirringa

3AUGS- PST(O:F)-3MINOBL.M-shoot-ITER  wallaby(M)

*awunyirra*  kulinjila

DEM.F  wallaby_spear(F)

‘they would spear the wallaby with the wallaby spear’  (Lee, 2011)

The verb *kupuri* ‘shoot (with wallaby spear)’ can be analysed as subcategorising three arguments: subject, object and oblique. The object is the instrument used to shoot with, the missile, and the entity that the missile is shot at is encoded as an oblique argument. A more accurate translation for (301) would therefore be ‘they would throw the wallaby spear at the wallaby’. Thus *jupwajirringa* ‘wallaby’, which is grammatically masculine, is marked on the verb by the 3MIN masculine oblique marker *mi*- The wallaby spear, *kulinjila*, which is grammatically feminine as shown by the feminine demonstrative *awunyirra*, triggers agreement on the tense marker *nti-* and thus functions as object.

It is possible that, over time, the agreement pattern has become fixed, and subsequently always encodes the object, in this case the wallaby spear, while the verb itself has broadened semantically such that it can mark other objects, including the masculine nominal *yilati* ‘knife’ as in (298) above.

There is one more structurally distinct instance of lexicalised agreement that provides further evidence for this analysis. Traditional Tiwi possesses two verbs, *kura* and *arawumi*, that both mean ‘die’, and that both exhibit the same non-canonical, lexicalised agreement pattern. They are illustrated in (302) and (303).
The agreement pattern suggests that the argument structure of these verbs is such that they take a subject, which is always 3MIN.F, and an oblique argument, which denotes the person who dies. A more accurate gloss could therefore be ‘death (F) happened to him’. The fact that both verbs meaning ‘die’ share the same non-canonical agreement pattern, and no other verb has this lexicalised agreement pattern, suggests that lexicalised agreement is a function of the semantics of the verb, otherwise there would be no reason that both verbs should have the same agreement pattern.

Lexicalised agreement is also attested for Mawng (Singer, 2006) however there are some significant differences between the two phenomena, and if they are linked at all, then they have diverged considerably.

In Traditional Tiwi, lexicalised agreement is limited to just these two patterns; ‘feminine’ verbs that always take agreement morphology that appears to encode a 3MIN feminine object, and the two verbs meaning ‘die’ that show a very different pattern, described above. Furthermore, these patterns are categorical; if a verb is in the feminine class, then it will always inflect this way, irrespective of the presence or absence of any object, and it would be ungrammatical to inflect it any other way.

In Mawng however, lexicalised agreement is more extensive, as it can utilise any of the five grammatical genders in either of two argument positions, meaning that multiple agreement patterns are possible (Singer, 2006). Furthermore, it is not necessarily the case that a verb always takes the same agreement pattern. In fact, different lexicalised agreement patterns for
the same verb correspond to different meanings for that verb. Lexicalised agreement in Mawng can therefore produce what appear to be non-compositional meanings of verbs.

For instance, the verb -aka means ‘throw’ when it takes canonical agreement. It also has two lexicalised agreement patterns. When it encodes an object from the Edible gender it means ‘build (a house)’, and when it takes an object from the Vegetation gender it means ‘go line fishing’. Similarly, the verb -atpi means ‘have/hold/carry’ when inflected canonically, but means ‘understand/have knowledge’ when it takes a Land gender object, and ‘win’ when it takes a Vegetation gender object (Singer, 2006:208).

Singer (2006:210) shows how the lexicalised meaning ‘go line fishing’ for the verb -aka ‘throw’, could have arisen, which also provides support for the claim I make above, that lexicalised agreement in Traditional Tiwi is a vestige of earlier collocations that became fossilised as the agreement pattern for that verb. The Vegetation gender entity that derives the non-compositional meaning ‘go line fishing’ from ‘throw’ is wakij ‘fishing line’, as shown in (304).

(304) Mawng:

<table>
<thead>
<tr>
<th>mang-aka-ngung</th>
<th>wakij</th>
<th>jita warranumpik</th>
</tr>
</thead>
<tbody>
<tr>
<td>3GEN/3VE-throw-PC</td>
<td>fishing.line(VE)</td>
<td>FE woman</td>
</tr>
</tbody>
</table>

‘the woman was casting out the fishing line’ (Singer, 2006:210)

The collocation of the verb -aka ‘throw’ with the object wakij ‘fishing line’ thus gradually comes to mean ‘go line fishing’. Eventually, the object can be elided from the syntax but preserved on the gender marking of the verb, in which case the verb still has the non-compositional meaning. This stage is illustrated in (305).

(305) Mawng:

<table>
<thead>
<tr>
<th>ngat-pani-ngan</th>
<th>ngatp-aka-n</th>
<th>tuka Malawurak</th>
</tr>
</thead>
<tbody>
<tr>
<td>1pl.ex-sit-PP</td>
<td>1pl.ex/3VE-line.fish-NP</td>
<td>LOC place.name</td>
</tr>
</tbody>
</table>

‘one time we went fishing at Malawurak’ (Singer, 2006:210)

I argue that feminine verbs in Traditional Tiwi underwent a similar transformation, but instead of now being productive and able to have different meanings based on different objects, they became fossilised and now can only show a single agreement pattern. This was potentially also aided by the comparative lack of genders in Traditional Tiwi compared with
five genders in Mawng, which would have allowed for multiple non-canonical agreement patterns for each verb.

6.4 Summary

In chapter 5, I show that the agreement morphology of Traditional Tiwi is able to be simplified from the previous major description, in which the subject and tense markers are taken to be portmanteau morphemes (Osborne, 1974:38). The subject agreement markers can be separated from the tense markers and each represented in a separate paradigm. This analysis foregrounds the complex morphological relationship between the subject and tense markers; interactions that were obscured under previous analyses. Describing these relationships in comprehensive detail is the aim of this chapter.

I show in §6.2.1.1 that subject markers are members of inflectional classes that condition the form of the tense marker. The two are therefore closely linked, but not inseparable as Osborne (1974:38) claims. Subject agreement markers do not generally form inflectional classes, and this is an area in which Tiwi is remarkable.

A further area in the agreement system of Tiwi in which is it particularly interesting is in the alternative function of the tense markers. While agreeing with the subject for class is the normal behaviour of tense markers, they switch to agreeing with the object for gender, if and only if the object is 3rd person minimal. The ability for an entire category of verbal affixes to switch in their function, is not something that is observed in agreement systems in general, and typologies of agreement do not refer to such phenomena (Corbett, 2006, 1983). Agreement shift is thus an area in which data from Traditional Tiwi challenges current morphological theory.

The next chapter will describe incorporation in Traditional Tiwi, of which there are four types: body part noun incorporation, regular noun incorporation, verb incorporation and comitative/privative incorporation. Having described in detail the processes involved in agreement shift in this chapter, I utilise it as a diagnostic tool in detecting the presence of syntactic objects, and thus differentiating between different types of incorporation. I will
furthermore discuss incorporation phenomena in Traditional Tiwi with respect to the cross-linguistic literature and the other Australian languages that exhibit this phenomenon.
CHAPTER 7

Incorporation

Like many languages in Australia’s north, including the Daly River languages and many Gunwinyguan languages, Traditional Tiwi exhibits incorporation of nominals into inflecting verbs. Tiwi also exhibits the incorporation of verbal elements into inflecting verbs, and in this respect Traditional Tiwi is unusual, as only a small number of Australian languages have been shown to possess verb incorporation (Evans, 2003:546). A third major type of incorporation that Traditional Tiwi possesses is comitative and privative constructions, which utilises the incorporated nominals, but which differ in terms of morphology.

Lexical elements that describe both events and entities can be incorporated in Traditional Tiwi. They are incorporated into distinct verbal positions and may co-occur. Verbal elements occur in position –4, whereas nominals occur in position –2. Positions –3 and –1 contain the comitative and privative affixes respectively. Thus, nominal and verbal incorporation are morphologically differentiated from each other. Verbal and nominal incorporation are exemplified in (306) and (307) respectively. (308) illustrates the co-occurrence of both an incorporated noun and verb.
Incorporable elements in Traditional Tiwi form a closed class. Lee (1987:160) estimates the total number of incorporable forms at somewhere between 100 and 150, a significant number of which are body part nominals such as *matingiri* - ‘head’ and *kiri* - ‘hand’. Forms referring to other entities are the next most numerous class, numbering around 50, and includes forms such as *kupi* - ‘tobacco’ and *pilinganti* - ‘basket’. Lastly there is a small class of around 20 incorporated verbs including *ungirlimpangi* - ‘sleep’ and *upuntinga* - ‘talk’.

The forms of the incorporated elements in Traditional Tiwi are generally suppletive from free forms. The degree of dissimilarity between bound and free elements, in both nominal and verbal incorporation, means that bound and free forms generally cannot be related to one another, apart from a few exceptions. There are also some incorporated forms for which no corresponding free form can be identified. There are just two other Australian languages – Murrinh-Patha and Aninhdhilyagwa – that exhibit such a high degree of phonological dissimilarity between incorporated forms and corresponding free forms (Dixon, 2002:429).

Traditional Tiwi exhibits four distinct types of incorporation: verb incorporation, as shown in (309), body part nominal incorporation, shown in (310), generic nominal incorporation, as in (311), and comitative and privative incorporation, as in (312) and (313), respectively.

(306) *nginayi kirijini yiminingirlimpangipirni*

DC.4.M. 3MINS.M. PST- SLEEP- hit
‘that kid hit me while I was sleeping’ *(AW_20120413_03:00:35:46)*

(307) *ngurrumatingiripunguraghamiya*

1MIN- PST- HEAD- hit HEAD-REFL
‘I hit myself on the head’ *(AW_20120411_01:00:00:56)*

(308) *gimingilipalipiyankinya*

yi- mi- UNGILIPANGI- LIPI- steal
3MINS.M. PST- SLEEP- RAW MEAT- steal
‘he stole raw meat from me while I was sleeping’ *(CO_699A: 00:55:37)*

(309) *yuwatumininingirlimpangipirni*

yi- wati- mini- UNGIRLIMPANGI- hit
3MINS.M. PST- MORNING- SLEEP- hit
‘he hit me while I was sleeping’ *(AW_20120413_03:00:37:43)*
After firstly discussing several properties of incorporation in Traditional Tiwi in general, this chapter will describe and exemplify the various types of incorporation exhibited by the Traditional Tiwi verb, and provide evidence for these four distinct types based on morphological and semantic evidence, as well as morphosyntactic effects, such as agreement shift discussed in Chapter 6, which provides a means to detect the presence of grammatical objects. After first introducing some morphological, syntactic and semantic features that are common to all types, §7.2 will focus on nominal incorporation, both body parts and generic nominals; §7.3 will focus on verbal incorporation; and §7.4 will focus on comitative and privative incorporation.

Throughout this chapter I refer to the incorporation of ‘nouns’ and ‘verbs’ even though the elements that undergo incorporation cannot always be said to belong to any such syntactic category. Indeed, some incorporated verbs have corresponding forms in multiple syntactic categories, such as inflecting verbs and coverbs. The terminology is intended to reflect the fact that the incorporated elements denote either entities or actions. I furthermore use the terms noun and verb incorporation to be consistent with the extensive body of literature that discusses incorporation phenomena.
7.1 Features of incorporation

Incorporation in Traditional Tiwi comprises four distinct verbal positions; two positions for verbal and nominal incorporates, and two positions for the comitative and privative affixes. All four verbal positions are contiguous and are immediately prior to the verb stem. The following reduced template illustrates the affix positions relevant to this chapter.

![Figure 35: Reduced verbal template for incorporation](image)

The fact that incorporated nominals and incorporated verbal elements occupy distinct positions is evidenced by the fact that one of each incorporate can occur, and always in the order verb–noun, as in (313).

(313) yuwatumungirlipangikupiyankinya yi- watu- mi- ungirlimangi- kupi- akinya 3MINS.M.PST- MORN- 1MINOBL- sleep- tobacco- steal ‘he stole tobacco from me in the morning while I was sleeping’ (CO_699A: 00:53:37)

There are no examples in the corpus of a comitative or privative construction co-occurring with an incorporated verb, even though it would be expected from this template and there is no apparent semantic constraint against such a construction. The absence of evidence should not be taken for evidence of absence.

Osborne (1974:48) claims that incorporated and free forms are generally not cognate, due to the fact that free forms that were cognate with incorporated forms were dropped from the lexicon due to the high rate of lexical replacement. Dixon (1980:437) agrees, and adds that the extensiveness of the Tiwi taboo system was a contributing factor to the lexical replacement.50 Some examples of phonologically distinct incorporated and free forms are given in Table 36.

50 The Tiwi people have a similar taboo avoidance system as other Australian Aboriginal people, wherein the names of recently deceased people are *pukumani* ‘taboo’ and cannot be used for a period of time, the length of which depends on several factors including the circumstances of the death and the social status of the deceased. In addition, nominals that have a similar phonological shape are similarly *pukumani*, and are unable to be used. For further information see Ward (1990:26).
Table 36: Phonologically distinct incorporated and free forms

<table>
<thead>
<tr>
<th>Type</th>
<th>Incorporated form</th>
<th>Free form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular nominals</td>
<td>irriningi-</td>
<td>turtini</td>
<td>‘funeral/grave post’</td>
</tr>
<tr>
<td></td>
<td>wilingi-</td>
<td>kirimpika</td>
<td>‘crab’</td>
</tr>
<tr>
<td>Verbs</td>
<td>ungirlimpangi-</td>
<td>-majirripi</td>
<td>‘sleep’</td>
</tr>
<tr>
<td></td>
<td>marrikuwangi-</td>
<td>yoji (coverb)</td>
<td>‘dance’</td>
</tr>
<tr>
<td>Body parts</td>
<td>pirrita-</td>
<td>ngimpala</td>
<td>‘shoulder’</td>
</tr>
<tr>
<td></td>
<td>matingiri-</td>
<td>pungunta</td>
<td>‘head’</td>
</tr>
</tbody>
</table>

There is further evidence for the lexical replacement theory in the existence of lexical compounds that similarly contain the elements that can be incorporated into inflecting verbs. Table 37 lists some examples of incorporated nominals that are represented in several extant lexical compounds. These further corroborate the hypothesis that incorporated nominals were once cognate with free forms, but that those free forms have since undergone lexical replacement, leaving bound forms unaffected.

Table 37: Incorporated nominals and lexical compounds

<table>
<thead>
<tr>
<th>Incorporated form</th>
<th>Lexical compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>mangu- ‘water’</td>
<td>mangupuranji ‘good-tasting water’</td>
</tr>
<tr>
<td></td>
<td>manguluwuni ‘tea’</td>
</tr>
<tr>
<td></td>
<td>mangulpwaruni ‘tide’</td>
</tr>
<tr>
<td>mili- ‘foot’</td>
<td>milikurti ‘big toe’</td>
</tr>
<tr>
<td></td>
<td>milipuranji ‘good dancer’</td>
</tr>
<tr>
<td></td>
<td>milikatwarinari ‘build-up season (time of hot feet)’</td>
</tr>
<tr>
<td>kiri- ‘hand’</td>
<td>kirikurti ‘thumb’</td>
</tr>
<tr>
<td></td>
<td>kirimunga ‘handful’</td>
</tr>
<tr>
<td></td>
<td>kiripaparajwu ‘dexterous’</td>
</tr>
</tbody>
</table>

These forms show that being bound in lexical compounds similarly protected them from phonological reduction or lexical replacement.

Notice also the recurrence of elements such as puranji in ‘good-tasting water’, ‘good dancer’ and ‘dexterous’, and kurti in both ‘thumb’ and ‘big toe’. Especially interesting here is the form kiripaparajwu ‘dexterous’, which contains a nominal pura(n)ji ‘good/lovely’\(^{51}\) that has been inflected for plural – using the more traditional plural circumfix comprising a reduplicated first syllable and a -wi suffix (see §4.2.1) – and then prefixed by kiri. These

\(^{51}\) Prenasalisation is subject to free-variation. See §4.1.1 for discussion.
compounds indicate the possibility of lexical compounding being productive in Traditional Tiwi, and strengthen Dixon’s (1980:437) hypothesis that incorporated nominals were once cognate with free forms, but that the latter have since undergone lexical replacement, leaving the former unaffected.

Despite this, it is still rare to find examples of free nominals, coverbs or inflecting verbs that phonologically resemble incorporated forms, and even rarer to find resemblances between bound and free forms in which the free form is not morphologically complex. There are only two clear examples of the latter case: the incorporated verb *makirri* - ‘frightened’ which is form-identical with both an inflecting verb root and a coverb, both with corresponding meaning, and *wulinji* - ‘thirsty’, which is clearly derived from the nominal *wulinjirri* ‘dry’.

Semantically, there are significant mismatches between a bound form and any identifiable corresponding free form. Some incorporated forms are semantically broader than corresponding independent forms. For example *ajumangilipi* ‘honey’, corresponds to around 14 independent nominals, all of which are semantically more specific. This would be expected on the basis of Baker’s (1988:78) claim, that incorporated forms are generic while free forms are specific.

Other incorporated forms however, are semantically narrower than any corresponding free forms. The incorporated forms *paningi*- ‘raw meat’, *kuntingi*- ‘cooked meat’ and *alipi*- ‘cooked and cut up meat’ all correspond to a single independent nominal *puningkapa*, which means ‘meat’ in general, and covers the semantic space of all three bound forms, and moreover, there do not appear to be any other non-incorporated nominal forms that correspond to the more specific kinds of meat that are encoded by incorporation. Incorporated forms that refer to many foods and edible animals similarly specify whether it is cooked or raw, whereas the free forms do not. Finally, there are some incorporated nominals, such as *mapi*- ‘dead body’ and *wunji*- ‘sick person’, for which no equivalent independent lexical item exists (Osborne, 1974:49).

This evidence suggests that the class of incorporable forms constitutes a set of bound morphemes that are separate from independent forms and are therefore not ‘derived’ from the free forms in a synchronic sense, though they may be diachronically derived from them. This further suggests significant time-depth and grammaticalisation of bound forms. Dixon
(1980:437) cites the relatively high extensiveness of the Tiwi taboo avoidance system as a possible contributing factor in the divergence of bound and free forms. If a word becomes *pukumani*, or ‘taboo’, due to the death of someone whose name is phonologically similar, then it undergoes lexical replacement. A corresponding incorporated form that was derived from the original taboo word would be protected from lexical replacement due to its being morphologically bound inside an inflecting verb. It would however, undergo phonological changes in virtue of being bound. By the time the taboo word is reintroduced into the lexicon, if indeed it ever is, then the bound form might have diverged from it enough that they no longer phonologically correspond to one another. Semantic shift may then occur, meaning that bound and free forms cannot be said to be related in any synchronic sense.

More recently, Dixon (2002:429) extends his argument, saying that languages in which bound and free forms show formal differences or suppletion are likely to have developed noun incorporation at ‘considerable time-depth’, whereas languages in which the bound and free form are phonologically more similar developed incorporation much more recently. The latter case is more usual in northern Australia. He cites just three languages – Murrinh-Patha, Anindhilyagwa and Tiwi – that exhibit a high degree of formal differentiation between bound and free forms and that therefore developed incorporation relatively early.

### 7.2 Noun Incorporation

Nominal lexical items are incorporated into inflecting verbs in position –2. There are two types of noun incorporation which I refer to as ‘body part incorporation’ and ‘generic incorporation’, following Evans (1996:72), among others. Body part and generic incorporation in Tiwi are not morphologically differentiated in the same way that they are in Mayali (Evans, 1996), in which each type of noun incorporation occupies a distinct templatic position in the verb. In Tiwi, they occupy the same slot and cannot co-occur. They are, however, differentiated on the basis of the relationship between the incorporated nominal and the verb.

Body part incorporation in Tiwi behaves like external possession constructions cross-linguistically (Payne & Barshi, 1999), in that the possessor is mapped to a core grammatical relation of the verb, and the possessum – the body part – is incorporated as an additionally licensed non-core argument.
Generic nominals on the other hand, are incorporated as core grammatical functions. The evidence for this is the effect that incorporated forms have on the verb agreement morphology. As shown in the previous chapter, 3rd person minimal objects trigger agreement shift, wherein the tenses show agreement for those objects. As I show in §7.2.2, generic noun incorporation also exhibits agreement shift, demonstrating that they are incorporated, and function, as true objects.

Body part incorporation and generic nominal incorporation are discussed in the following sections.

### 7.2.1 Body part incorporation

An incorporated body part nominal specifies the part of the body where the action encoded by the verb takes place. The incorporated nominal is in a part-whole relationship with one of the subcategorised arguments of the inflecting verb. Body part incorporation is similarly attested in many northern Australian languages, including Mayali (or Bininj Gun-Wok) (Evans, 1996), Aninhdhilyagwa (van Egmond, 2012), Rembarrnga (Saulwick, 2003), Dalabon (Cutfield, 2012), Wubuy (B Baker, et al., 2010), Murrinh-Patha (Forshaw, 2011) and others. The body part incorporation exhibited by Tiwi is consistent with the general pattern in northern Australian languages.

In Wubuy, there are two different syntactic constructions that allow body part incorporation. Internal Possession Construction and External Possession Construction (B Baker, et al., 2010). The difference between these two constructions is the argument structure mapping of the possessor and the possessum (the body part). In internal possession constructions, the possessum is mapped to the direct object and therefore triggers agreement on the verb. The possessor in internal possession constructions, is marked with genitive case. In external possession constructions the argument mapping of the possessor and possessum are reversed. The possessor is mapped to the direct object, and the possessum takes oblique case, if it is doubled by an external noun phrase.

In both internal and external possession constructions, the possessed body part can be incorporated. Due to the different argument structure mapping of the possessum in these two constructions, they have different morphological realisations in the verb agreement. Examples
and (315) below illustrated the Wubuy internal, and external possession construction respectively (emphasis mine).

(314) Internal possession construction (Wubuy):

ng-a-wu-yarrga-nagi-ina yii-ngarrantja
1SG-NEUT-flipper-cook.PR FEM.OBL-dugong
‘I’m cooking the dugong’s (FEM) flipper (NEUT)’
(B Baker, et al., 2010:66)

(315) External possession construction (Wubuy):

nga-ngu-yarrga-gambana (njarra-ngarrungalja)
1SG-3FEM-flipper-roast.PR FEM.TOP-dugong
‘I’m roasting the dugong’s (FEM) flipper (NEUT)’
(B Baker, et al., 2010:66)

Baker et al. (2010:67) also note that in external possession constructions, the body part possessum is optionally doubled by a noun with oblique case or in an oblique noun class/case form.

Body part incorporation in Traditional Tiwi allows only a structure that is comparable to the external possession construction in Wubuy. The body part is not a core argument of the verb, but is possessed by a core argument, most often the object. For example, the incorporated body part in (316), mili- ‘foot’, is possessed by the object, which is marked by the object agreement affix mini- ‘1MIN’.

(316) yiminimilipuragha
yi- mini- mili- puragha
3MINS.M.PST- 1MINO- foot- smash_on_ground
‘he smashed my foot on the ground’ (AW_20120315_01: 00:11:03)

One difference between Wubuy and Tiwi with respect to this construction is that due to the lack of dependent marking in Tiwi, a doubled possessum cannot be marked with oblique case. If a body part is doubled, as in milapwarra ‘foot’ in (317) or jirnima ‘beard’ in (317), it is unmarked for case. Note however that the verb still encodes the possessor as the object.

(317) yiminimilipirni milapwarra
yi- mini- mili- pirni milapwarra
3MINS.M.PST- 1MINO- foot- hit foot
‘he hit me on the foot’ (AW_20120315_01: 00:10:47)
So in Tiwi, the possessed body part is syntactically distinct from the possessor (ngiya and jirnima do not necessarily form a noun phrase in (318)) and the possessor is encoded as a core grammatical function. These constructions are therefore consistent with External Possession as defined by Payne and Barshi (1999:3), in that the possessor is encoded as a core grammatical relation of the verb, and the possessum is encoded as an external syntactic constituent.

Body part incorporation in Traditional Tiwi therefore shows considerable similarity with body part incorporation in Murrinh-Patha, particularly as doubled body parts in Murrinh-Patha are not marked as obliques.52

(314) Murinh-Patha:

\[
\text{pangkin (nhinhi) mam-nhi-rdarri-purl}
\]
\[
\text{back 2SG 1SG.HANDS(8).NFUT-2SGO-back-wash}
\]

I washed your back. (M Walsh, 1996:330; Forshaw, 2011:46)

Forshaw treats body part noun incorporation in Murrinh-Patha as licensing an additional argument (Forshaw, 2011:47) and that they therefore can be treated in much the same way as the external possession construction in Wubuy, as shown by Baker et al. (2010). A difference between body part incorporation in Murrinh-Patha and Wubuy is that in Murrinh-Patha the additionally licensed argument is a semantically restricted object, whereas in Wubuy, it is an oblique (B Baker, et al., 2010).

I argue that such an analysis similarly holds for body part noun incorporation in Tiwi. When incorporated, body parts license an additional argument, and incorporated body parts are therefore not core arguments of the verb. In the following examples, the incorporated nominal matingiri- 'head' is not functioning as a core argument.

(319) ngurrumatingiritinyawamiya

\[
\text{ngi- rri- matingiri- utinyawu-amiya}
\]
\[
\text{IMIN- PST(A)- head- shave-REFL}
\]

‘I shaved my own head’ (AW _20120319_ 02: 00:01:30)

52 This example originally appeared in Walsh (1996:330) however the glossing is from Forshaw (2011:46).
In (320), the verb *nyipirimatingirimijingali* is transitive and licenses two arguments, but here is reflexivised by *-amiya*. The incorporated nominal *inkiri*–‘face’ does not function as either subject or object, but is an additional object. Similarly in (320), the verb *mijangili*–‘be attractive’ is intransitive and licenses only a single argument, as encoded by the agreement morphology.

To summarise, if the incorporated body part functioned as an object, either by itself or in an appositional relationship, then it would be difficult to account for examples such as (319) and (320), as there is no syntactically licensed object into which the body part can be incorporated. The behaviour of body part incorporated is thus consistent with external possession constructions, in which the incorporated body part is not a core grammatical relation of the verb, but an oblique argument instead.

Another aspect of these examples to note is the fact that the incorporated body part has no effect on the verb morphology; the form of the tense markers *rri*- and *mpi*- is determined by the class of the subject. As shown in the previous chapter, 3MIN objects trigger morphological changes to the tense markers such that the Class feature of the tense marker encodes the gender of the object. This has not occurred here, which further underscores the fact that incorporated body parts are not objects.

In this respect, body part nominal incorporation in Tiwi contrasts with generic nominal incorporation (discussed in the next section) in which the nominal does condition morphological changes in the tense marker, and therefore is an object.

### 7.2.2 Generic incorporation

Traditional Tiwi also exhibits incorporation of generic nominals; nominals that refer to objects in the world, outside of the domain of body parts. As this section will show, the relationship between incorporated generic nominals and the inflecting verb is different from that of body part incorporation. Whereas body part incorporation licenses an additional, non-
core argument, generic nominals function as core arguments, most often as objects, and thus trigger agreement among the tense affixes according to the description in §6.2.2. Agreement shift therefore provides a independent diagnostic to distinguish the morphosyntactic properties of these two types of incorporation in Tiwi.

The corpus of recordings does not contain any examples of a generic noun functioning as a subject, but Lee provides one example of this, given below in (324). Apart from this single example, in all instances of generic nominal incorporation the nominal functions as the object. Examples (321) through to (323) illustrate this.

(321)  ngirrikuwanga
   ngi- rri- ø- kuwa- nga
1MINS- PST(O:M)- 3MINO- knife- grab
‘I grabbed the knife’ (CO_699A: 00:20:57)

(322)  ngimpatirrakirtirruwa
   ngi- mpi- ø- ati- akirtirruwa
1MINS- NPST(O:F)- 3MINO- axe- carry_on_shoulders
‘I carry the axe on my shoulders’ (Lee, 2011)

(323)  yimungirlipalipiyakinya
   yi- mi- ungirlimpangi- alipi- akinya
3MINS.M.PST- 1MINOBL- sleep- raw_meat- steal
‘he stole raw meat from me while I was sleeping’ (CO_699A: 00:55:37)

(324)  yi- paningi- miringarra
3MINS.M.PST- white_man- live
‘the white man lives here’ (Lee, 1987:161)

Mithun (1984) describes a typology of four types of noun incorporation. They are type I, lexical compounding; type II, manipulation of case; type III, manipulation of discourse structure; and type IV, classificatory noun incorporation. These four types form an implicational hierarchy such that if a language exhibits type IV it exhibits the others, but if a language exhibits type I, it does not necessarily exhibit types II, III or IV.

Lexical compounding (type I) is the compounding of a lexical element into a verb to produce a new lexical verb with a specialised meaning. Lexical compounding produces an intransitive predicate that denotes a ‘unitary concept’, or some ‘institutionalised activity’ (Mithun, 1984:856). An example in English might be baby-sitting. The incorporated noun no longer
refers to a specific referent, but instead “narrows the scope of the verb” (Mithun, 1984:856). Mithun provides the following as an example of type I noun incorporation in Traditional Tiwi:

(325) nguwuntilinyawu
    ngi- wuntili- wunyawu
    IMIN.NPST- missile- throw
    ‘I shoot’ (Mithun, 1984:881, citing Osborne, 1974)

Manipulation of case (type II) resembles type I in some of the effects on the incorporated noun, such as the inability to be modified, and a reduction in valency of the host verb.

Manipulation of discourse structure (type III) is again, similar to types I and II in that it results in the reduction of valency of the verb, and structurally speaking all three types are identical. The function of the types however is distinct. Type III is used for the backgrounding of the incorporated noun with respect to the discourse. That is, old information is backgrounded by incorporating it into the verb, whereas new information will not be incorporated.

Classificatory noun incorporation (type IV) is considerably different from the other three in terms of its structure. In its function, classificatory noun incorporation is on the same cline as types I, II and III, as it is used for the backgrounding of information within the discourse. Structurally however, classificatory noun incorporation differs in that it allows doubling and stranding, and does not result in the reduction of valency of the verb.

Mithun (1984:881-82) claims that Tiwi exhibits types I, II and III, but not type IV noun incorporation. I show below however that Tiwi noun incorporation is a classic example of type IV, in that it does not result in the reduction of valency, and while there is little evidence of stranding, it also allows doubling.

Rosen (1989) describes two types of noun incorporation: compound noun incorporation and classifier incorporation. Compound incorporation subsumes Mithun’s (1984) types I, III and III whereas Rosen’s classifier noun incorporation corresponds with Mithun’s type IV noun incorporation. Compound noun incorporation satisfies an argument of the verb within itself. Thus resulting in the reduced valency of the verb. Classifier noun incorporation on the other hand, does not involve any change of valency. In classifier incorporation, according to Rosen
(1989:296), the relationship between the incorporated noun and an external noun is analogous to the relationship between a noun and its noun classifier.

This typology leads to some predictions that make it a fairly simple matter to determine whether a language exhibits compound noun incorporation, classifier noun incorporation, or both. For example if a language exhibits compound noun incorporation then there should be effects due to the reduction in valency. However if a language exhibits classifier noun incorporation, then it will exhibit other features, such as the doubling of an incorporated nominal by an external noun phrase, or stranding, in which an external modifier is left without the head that it modifies, as it has been incorporated into the verb.

The data shows that generic nominal incorporation in Traditional Tiwi is an instance of classifier incorporation. While there is very little evidence of stranding of incorporated generic nominals in Tiwi, there is some data that illustrates doubling, and extensive examples showing that the verb undergoes no reduction of valency and that rather, the incorporated nominal has the same effect on the verb agreement system as a syntactic object.

Generic noun incorporation in Tiwi permits the doubling of the incorporated noun by an external noun phrase, as shown by (326) and (327).

(326)  

\[
\text{ngiya naki yilati ngurrukuwani} \\
\text{ngiya naki yilati ngi- rri-wa- ini} \\
\text{IMIN PROX.M knife 1MINS- PST- knife- have} \\
\text{‘I have this knife’} \\
\text{AW_20120411_01:00:21:46}
\]

(327)  

\[
kurlalagha pwajinwalintiya pirrimirripiyantingimamini \\
kurlalagha pwajinwalintiya \\
hunting wallaby.f \\
\text{pi- rri- mirri- piyantingu- ma -mini} \\
\text{3AUGS- PST- 3MINOBL.F- wallaby- do -ITER} \\
\text{‘they would go hunting for wallaby’} \\
\text{Lee, 1987:162-3}
\]

This is similarly true of body part incorporation, as shown in (328).

\[
\text{There may also be some examples of compound noun incorporation, particularly compounds that have been lexicalised, such as mangapa ‘drink’, which is transparently the product of mangu- ‘water’ incorporated into apa ‘eat’. Examples of productive compound noun incorporation, however, are very rare.}
\]
Examples that illustrate doubling of incorporated nouns are fairly rare in the corpus of recorded materials, but the above demonstrate that doubling is possible.

Verb agreement, and the use of agreement shift in verbs that exhibit generic nominal incorporation is better evidence that Tiwi noun incorporation is of Rosen’s (1989) classifier type, or type IV in Mithun’s (1984) typology. As detailed in chapter 6, tense markers in Tiwi undergo a process called agreement shift when the verb encodes a 3rd person minimal object. They switch in the controller of their agreement from one grammatical function to another. Where the tense markers ordinarily agree with the subject for class, when a 3MIN object is present, they instead agree with the object for gender. There are several examples in the recorded corpus demonstrating that this occurs with generic noun incorporation in Tiwi, and that therefore, incorporated generic nominals are objects.

Unfortunately, due to the fact that incorporated forms in Tiwi, and this is true of body parts, generic nominals, and verbs, do not necessarily resemble free forms, and are frequently quite distinct, it is difficult to say with certainty that a particular incorporated nominal is either masculine or feminine. However it is still possible to observe the effects of agreement shift by looking for examples in which the tense markers do not correspond to the subject marker in their value for the Class feature.

1st person minimal subject for example is Class A, which for past tense is rri-, whereas in examples (329) to (331), the tense marker is nti-, which is the Class B past tense marker.

(329)  ngintuwalipwunga
ngi- nti- e- alipi- wunga
1MINS- PST(O:F)- 3MINO- cooked- meat- grab
‘I grabbed the cooked meat’ (CO_699A: 00:21:09)

(330)  ngintipilingantunga
ngi- nti- e- p- ilinganta- wunga
1MINS- PST(O:F)- 3MINO- ?- basket- grab
‘I grabbed the basket’ (CO_699A: 00:21:43)
The fact that these examples show a 1MIN subject occurring with a Class B tense marker can only be the result of agreement shift, and therefore indicates the presence of a feminine object.

These examples were all recorded in the same few minutes, and few examples outside these exist in the corpus. They are interspersed however, with parallel constructions, including (332) and (333) below, which take masculine agreement instead.

These suggest that the examples (329) through to (331) above are not random or due to a misunderstanding or production error on the part of the interviewee. The only plausible explanation for the use of the Class B tense marker *nti-* with a Class A subject *ngi-*, is that the incorporated nominal is feminine and thus triggers the recruitment of the tense marker to encode its gender.

There are further examples of generic nominals incorporated into verbs that similarly exhibit agreement shift. They are not recorded, but they occur in the Tiwi online dictionary (Lee, 2011).
In (335), *ilinganta*—‘basket’, is the same nominal as in (330) above. The fact that both are attested as taking the same non-canonical agreement in separate sources is further evidence that these forms are not due to random variation or speaker error, but that they have undergone agreement shift, and therefore, that generic nominal incorporates function as objects.

I therefore argue that generic noun incorporation in Traditional Tiwi is an example of Mithun’s (1984:863) type IV classificatory noun incorporation, which corresponds to Rosen’s (1989:297) classifier noun incorporation. The incorporation of generic nominals into Tiwi inflecting verbs does not result in the reduction of valency of the verb, and the incorporates themselves function as objects.

There is a significant shortcoming in this argument however, and that is the limited data on which it relies. Osborne unfortunately did not collect examples parallel to those in (332) and (333), but with Class B subjects rather than Class A. This is also an area that I did not have a chance to concentrate on during my field trip. If the analysis presented here is accurate, then it predicts that the tense markers would still be of Class A (that is, ø- or rri-) as they would agree with the masculine incorporated nouns *kiyanji*—‘stone’ and *kupi*—‘knife’. A verb meaning ‘she grabbed the tobacco’ where ‘tobacco’ is incorporated using *kupi*- would be additional support for this analysis or, if it were to take the Class B tense marker, would effectively falsify it.

### 7.3 Verb incorporation

Traditional Tiwi inflecting verbs also allow for the incorporation of lexical items that encode events. While they are not verbs in the sense that they do not derive from the verb word class, for convenience the process is called verb incorporation. There are roughly 25 attested incorporated verbs, occupy their own position in the verb template, and may occur alongside incorporated nominals.

While noun incorporation is fairly common among northern Australian languages, verb incorporation is cross-linguistically more rare. Dixon (2002) does not make any mention of
incorporated verbs, and Evans (2003:546-47) lists only a couple of Gunwinyguan languages that possess it, including Bininj Gun-Wok, Rembarrnga and Dalabon.

McKay (1975:175) describes a series of verbal suffixes in Rembarrnga, formed out of the grammaticalisation of the verbs re ‘go/come’ and many ‘went’. They encode motion simultaneous with the verb that they mark. He also notes that the stem that these aspectual suffixes attach to must be infinitival forms. Saulwick (2003:495) diverges from McKay on this, and considers these associated motion and progressive aspect constructions to be instances of verb incorporation in which the host verb is highly restricted to one of three verbs, all meaning ‘go’. As such they are not verbal affixes formed out of verbs, but host verbs that allow the incorporation of other, infinitival verbs.

This is very similar to the verb incorporation noted for Dalabon (Evans, 2003:547), in which the verb bon ‘go’ may incorporate another verb, but the incorporated verb must be suffixed by ye, which Evans refers to as having a ‘gerundivising’ function. An example is given in (336).

(336) Dalabon:

dulh  djakih    kah-warne-ye-bo-n
stick     that     3-float-IVF-go-PR
‘a stick is floating along (down the river)’  (Evans, 2003:547)

Verb incorporation in Tiwi is more productive in the sense that there do not appear to be restrictions on the host verb; many inflecting verbs are attested to take incorporated verbs. As for the incorporated verb, they form a closed class and are not productive. Only about 20 forms are recorded and they are mostly phonologically irreconcilable with free forms.

Incorporated verbs generally encode atelic activities like ungirlipangi- ‘sleep’ and utani- ‘cry’, states such as marrawurri- ‘full of food/pregnant’ and makiniri- ‘be frightened’, and less commonly, telic activities such as ankiri- ‘finish’. Interestingly, one incorporated verb, majimanga- ‘fetch water’, appears to license a further argument.

Incorporated verbs behave similarly to incorporated nominals in that they are predicated of the absolutive argument; either a transitive object or an intransitive subjects. Semantically,

---

54 Osborne (1974:48) also lists mapigamurrini- ‘make spears’ but no independent evidence for this incorporated verb can be found.
they encode an imperfective, unbounded event during which the event encoded by the inflecting verb occurs. Example (337) illustrates this.

(337) yuwatuminungirlimpangipirni yi- watu- mini- ungirlipangi- pirni 3MINS.M.PST- MORN- 1MINO- sleep- hit 'he hit me while I was sleeping' (AW_20120413_03: 00:37:43)

The semantic interaction between the two events encoded by this verb are that the subject is sleeping prior to the event being described, and then the hitting takes place. The pre-existing event is encoded by the incorporated verb ungirlipangi- ‘sleep’, while the hitting event is encoded by the inflecting verb pirni. All instances of verb incorporation follow the same pattern, and are nearly always translated with a ‘while’ clause in English.

(338) yimupuntingakupiyankinya yi- mi- upuntinga- kupi- akinya 3MINS.M.PST- 1MINOBL- talk- tobacco- steal ‘he stole tobacco from me while I was talking’ (CO_699A: 00:59:09)

(339) yiminimajimangukiringa yi- mini- majimangu- kiri- nga 3MINS.M.PST- 1MINO- fetch_water- hand- grab ‘he grabbed me by the hand while I was fetching water’ (CO_699A: 00:51:20)

Incorporated verb constructions are therefore compositional; the incorporated verb and the host verb never form compound verbs with noncompositional meanings. As such, there do not appear to be any semantic restrictions on the host verb, since any conceivable event could be modified with a simultaneously occurring imperfective, and generally atelic event.

Example (339) also demonstrates that incorporated nominals and incorporated verbs can occur simultaneously, given that they occur in distinct verbal positions. Incorporating two nominals or two verbs however, is not possible.55

55 Lee (1987:164) cites one example that appears to have two incorporated nominals, one of them a generic nominal and the other a body part. However the corpus contains no further instances and as such it cannot be confirmed.

nga- mpi- ri- kiji- maripsi- ritiwa 1AUG- NPST- ?: stick- chest- slit_open ‘we slit (the goose’s) chest open with a stick’ (Lee, 1987:164)
While incorporated verbs are generally predicated of the transitive object, as shown in (340), they can also be predicated of intransitive subjects, as in (341), and obliques, as in (342). It is always true, however, that the argument of which the incorporated verb is predicated is the lowest grammatical function. In this respect, incorporated verbs function in the same way as incorporated nouns and comitative/privative constructions.

(340) yuwatumingirlimpangipirni
yi- wati- mini- ungirlipangi- pirni
3MINS.M.PST- MORN- 1MINO- sleep- hit
‘he hit me while I was sleeping’ (AW_20120413_03: 00:37:43)

(341) yirnukuni ngawungirlimpangirrughi
yirnukuni nga- ungirlipangi- ughi
long_time 1AUGS.NPST- sleep- put
‘we sleep for a long time’ (Lee, 2011)

(342) yimingilipalipiyankinya
yi- mi- ungilipangi- alipi- ankinya
3MINS.M.PST- 1MINOBL- sleep- raw_meat- steal
‘he stole raw meat from me while I was sleeping’ (CO_699A: 00:55:37)

Incorporated verbal constructions generally have synonymous periphrastic paraphrases. In the three examples below, (343) uses incorporation, (344) uses a non-finite coverb clause, and (345) uses a separate subordinate clause introduced by the temporal complementiser karri ‘when’, with a fully inflected verb majirripi ‘sleep’.

(343) wakwakini yuwatumingirlipangimparighi
wakwakini yu- watu- mini- ungirlipangi- angipari- amighi
crow(M) 3MINS.M.PST- MORN- 1MINO- sleep- wake -CAUS
‘the crow woke me up in the morning (while I was sleeping)’
(AW_20120413_03: 00:18:35)

(344) ngiya kirliminjangini, api purrumintangimparighi
ngiya kirliminjangini api pi- rri- mini- angipari- amighi
1MIN sleeping CONJ 3AUGS- PST- 1MINO- wake -CAUS
‘I (was) asleep, and they woke me up’ (AW_20120411_03: 00:21:41)

(345) yuwatumingiligipirni karri ngurruwunjumajirripani
yi- wati- mini- ungirlipangi- pirni
3MINS.M.PST- MORN- 1MINO- sleep- hit
karri ngi- rri- wunjingu majirrip -ani
when 1MIN- PST- DUR- sleep -ITER
‘he hit me while I was sleeping’ (AW_20120413_03: 00:37:43)
Where incorporation is possible however, it is the preferred structure. Verb incorporates are also given in response to elicitation stimulus when no such meaning is intended. For example, the stimulus for (343) was ‘the crow woke me up in the morning’ and did not make any reference to sleeping. The offered form however still contains the incorporated form *ungirlipangi* - ‘sleep’.

### 7.4 Comitative and Privative incorporation

The last type of incorporation of lexical elements into inflecting verbs in Traditional Tiwi requires additional morphology. In verbal positions –3 and –1 are the comitative and privative affixes respectively. These affixes license a complement nominal, which is sourced from the set of incorporable nominals. Semantically, comitative constructions add a non-argument entity that is taken to be ‘with’ an argument of the verb. The privative is the negation of a comitative; the lacking of the entity.

Comitative and privative incorporation differ syntactically from nominal incorporation in that nominals do not function as arguments, nor do they restrict or specify the domain or scope of an argument as body part incorporation does. Comitatives function as applicatives in that they license an additional, non-core argument.

Comitative markers are found in several Gunwinyguan languages, including Bininj Gun-Wok (Evans, 2003), Rembarrnga (Saulwick, 2003), and others. While the function of the Tiwi comitative and privative constructions are similar to these, I show in this section that they are structurally different.

The comitative applicative in Bininj Gun-Wok has many more functions than in Tiwi (Evans, 2003:432). These functions include locative, speaking a language, eventual possession, cause, and other more marginal uses. Also, not all dialects of Bininj Gun-Wok exhibit all functions; the ‘speaking a language’ use for example is restricted to Manyallaluk Mayali (Evans, 2003:434).

The added argument in Bininj Gun-Wok may manifest either as an incorporated nominal, as an external nominal only, or it may have no overt realisation at all. In this sense the Bininj Gun-Wok comitative applicative is similar to the Traditional Tiwi comitative. As I show
below, the comitative marker *marri/maji-* and indeed the privative *wamini-*, both license an incorporated nominal, or the nominal may be expressed externally to the verb, or not at all.

Importantly, comitatives in Bininj Gun-Wok increase the valency of the inflecting verb, and the added argument is cross-referenced on the verb by an object prefix, as in (346).\(^{56}\)

(346) Bininj Gun-Wok:
\[
djenj \quad ka-re-dohlme
\]
\[
fish \quad 3>3\text{-COM-pop}\_\text{up.NP}
\]
\[
'(the bird) pops up with a fish'
\]
\[(Evans, 2003:433)\]

Saulwick (2003:227) describes no less than four morphemes in Rembarrnga that have a comitative function, and three of those have a second function, either cause or privative,\(^{57}\) depending on the host verb that they mark. For example, the verb *rditj* ‘return’ marked with the verbal comitative *yi-* produces a derived verb *yi-rditj* meaning ‘return with’, whereas when the verb *ru* ‘cry’ marked by the same comitative, produces a derived verb in which the additional argument is construed as a cause; *yi-ru* ‘cry over’ (Saulwick, 2003:228). Similarly with both Bininj Gun-Wok and Tiwi, the Rembarrnga verbal comitative *yi-* allows the additional argument to be incorporated, as in (347) below. The other comitative applicatives however, do not appear to allow incorporation of the additional argument.

(347) Rembarrnga:
\[
... \quad da-guh-ye-rditj-ja \quad jørnæ-gah \quad batto-ji
\]
\[
2>3\text{-dead}_\text{body}\_\text{COM-return-FUT} \quad \text{camp-ALL} \quad \text{there-TLOC}
\]
\[
'... \quad \text{you'll return with its body (the animal) to camp}'
\]
\[(Saulwick, 2003:230)\]

Moreover, as the above shows, the Rembarrnga comitative *yi-* increases the valency of the verb. In this respect the comitative applicatives in Rembarrnga and Bininj Gun-Wok function similarly with one another, while the Tiwi comitative and privative constructions differ. In Tiwi, the comitative and privative have no effect on the valency of the verb.

The use of the comitative *marri-* is illustrated in (348) and the privative in (349). Note that while the comitative occurs immediately prior to the incorporated nominal, the privative marker occurs immediately after.

\(^{56}\) The gloss \(l\) denotes a ‘lower’ object.

\(^{57}\) Saulwick uses the term ‘deprivative’. I will continue to use the term ‘privative’ for consistency.
The generalisation mentioned elsewhere for incorporation, that the argument with which the incorporate is associated is the lowest grammatical function, similarly holds true for comitative constructions. Both the examples above show the incorporated nominal kupi-‘tobacco’ construed as being with the subject of the intransitive host verb amurnipa ‘rise’. Other examples, such as (350) below, show the added argument being construed as being with the object of a transitive.

(350)  
\textit{yuwunimarriwangirri}  
yu- wuni- marri- wa- angirri  
3MINS.M.PST- 3AUGO- COM- word- send  
\textit{he sent them with a message/words}  
(Lee, 1987:163)
The privative *wamini*- can similarly be used without an incorporated nominal element. The entity that the argument lacks can be expressed externally, as in (356), or understood from context (355).

The corpus does not contain any examples that clearly show *wamini*- occurring without a nominal in which it is taken to mean ‘without some indefinite thing’, that is, parallel to example (352) above. It could be merely due to a lack of data, or more likely, it could be a pragmatic constraint against privation of unknown entities. That is, it is quite conceivable to encode the having of some unknown entity, but not to encode the lack of something unknown.

Comitative incorporation can in some cases interact semantically with the inflecting verb and produce constructions that may be interpreted non-compositionally as bivalent, but agreement morphology, specifically the lack of agreement shift, indicates that they are not syntactically transitive. The comitative construction therefore, does not increase the valency of the host verb. The additionally argument licensed by the comitative marker is a non-core argument.
When a comitative occurs in combination with the verb -uri ‘go’ for example, the resulting verb has the meaning ‘take’. As the examples below demonstrate, this occurs whether or not an overt incorporated entity is present.

(357)  

\begin{verbatim}
arnunkwa ngumatamarruri
arnunkwa  ngi- ma- ta-  marri- uri
NEG  1MINS.NPST- IRR-  NEG-  COM- go
\end{verbatim}

‘no, I won’t take (her)’

(AW_20120411_02: 00:44:50)

(358)  

\begin{verbatim}
yimarrikupuri
yi- marri- kupi- uri
3MINS.M.PST- COM- tobacco- go
\end{verbatim}

‘he took the tobacco’

(CO_699A: 00:23:54)

Furthermore, if the same verb is marked with the hither marker (wu)ni-, then the verb has the meaning ‘bring’, as illustrated above in example (354).

I argue on the basis of morphological evidence, detailed below, that these constructions do not constitute the derivation of new verbs and that ‘take’ and ‘bring’ are simply the most reasonable English interpretations. The evidence for this is that the incorporated entities do not trigger agreement shift, and therefore do not function as objects, as would be expected if the intransitive verb uri ‘go’ had been derived into a transitive verb marruri ‘take’.

As described in §7.2.2, generic nominal incorporation triggers agreement shift, and as such the gender of the incorporated object is encoded by the tense marker, or by the subject marker if the subject is 3MIN (see §6.2.3.2). Example (359) illustrates this process for ati- ‘axe’, a feminine generic nominal being incorporated and functioning as an object.

(359)  

\begin{verbatim}
ngimpatirrakirtirruwa
ngi- mpi- ati- akirtirruwa
1MINS- NPST(O:F)- axe- carry_on_shoulders
\end{verbatim}

‘I carry the axe on my shoulders’

(Lee, 2011)

If the same incorporated nominal is introduced by the comitative marker however, there is no effect on the agreement system. If the comitative were to increase the valency of the host verb, and derive a transitive verb marruri meaning ‘take’, then the subject-tense portmanteau morpheme in (360) would be ji- and would encode the gender of the incorporated object.
Rather, the subject-tense prefix yi- is what is expected if the verb exhibits canonical agreement, that is, where agreement shift does not occur.

Similarly for ilipi- ‘paperbark’, which is similarly a feminine incorporated noun as evidenced by the agreement shift on the verb in example (362), yet it does not trigger the same shift in (361). Again, ji- would be expected. Instead it is structurally identical to (363), which is simply an intransitive verb with a comitative noun.

Therefore, marking a verb with the comitative markers marri-/maji- does not result in any change of transitivity of the host verb, and the nominal that the comitative takes as its argument is in a non-core argument relation to the verb. Due to Tiwi having no dependent marking, it is not possible to ascertain whether these comitative arguments are obliques or not.

Incorporation in Traditional Tiwi is thus comparable to other Australian languages that possess incorporation, as well as other polysynthetic languages as it fits with the patterns predicted by typologies such as Mithun (1984) and Rosen (1989).
CHAPTER 8

Discussion and Conclusion

In this chapter, I summarise and contextualise the contribution this thesis makes to the understanding of the verb morphology of the Traditional Tiwi language – the primary aim of this thesis – as well as to linguistics.

I will furthermore recapitulate the findings of this thesis with respect to the linguistic features of the Tiwi inflecting verb, as well as the features of the language in general, and use these to reconsider the classification of Tiwi with respect to other languages and language families.

8.1 Contribution of this thesis

The inflecting verb of Traditional Tiwi has been called the most complex verb among Australian languages (Dixon, 2002:408). Despite this, the previous descriptions of the language do not go into enough detail in enough areas of the verb morphology. This thesis is an attempt to address this shortfall in our understanding of Tiwi, and provide the language
with a more comprehensive description of the morphological phenomena exhibited by the verb.

Throughout this thesis I have shown that there are several features of the verb that are unusual for Australian languages, and moreover, some features that are unusual among all languages. For example, whereas the general pattern in Australian languages is for tense to be a suffix on the verb, or otherwise both a suffix and a prefix, a common pattern among northern Australian languages. Tiwi encodes tense as a prefix only. Tiwi thus stands apart from the general pattern among Australian languages in the position of verbal tense marking.

A further aspect of the morphology of the Tiwi verb that is unusual for Australian languages is the presence of inflectional classes for subject markers, which determine the form of tense markers. Within Australian languages, particularly in the Pama-Nyungan family of languages, verb stems usually fall into inflectional classes determining the form of tense markers. Here however, class membership is not a feature of verb stems themselves, but the subject markers. Furthermore, subject markers exhibiting inflectional class membership is not something that is otherwise reported in typologies of tense and agreement (Comrie, 1985; Dahl, 1985; Binnick, 2012, 1991; Corbett, 1983; Aronoff, 1994). In this area, Tiwi and my description of inflecting verbs, presents new and interesting empirical findings that challenge the current understanding of agreement.

Another aspect of the verb morphology that sets Tiwi apart is the phenomenon of agreement shift in which a target of agreement shifts from one controller to another. This phenomenon, described in detail in chapter 6, is central to the grammar. The relationship between subject agreement and tense markers as described above is entirely subverted, such that the tense markers all switch from agreeing with subject markers for their class feature, to agreeing with the object for gender. Osborne’s (1974) description of the agreement system, which Lee (1987) follows, obscures the occurrence of this phenomenon by positing the forms of subject and tense markers for all combinations of subject, tense and object. My account instead simplifies the description of the agreement system by separating the paradigm into distinct templatic slots (see §5.1.1). This represents an improvement on the description of the verb morphology, and suggests that the close relationship between tense marking and the agreement system have to be more closely scrutinised. Such scrutiny, as undertaken in §6.2.2, reveals that Tiwi
Inflecting verbs behave very unusually, not just for Australian languages but for languages in general. The ability for an entire morpheme category to switch the controller that it agrees with, is not an aspect of agreement that has been demonstrated before and is, I believe, something entirely undescribed.

There are other areas in which the Traditional Tiwi verb behaves quite normally and within the confines of the current theories. These areas are of cross-linguistic interest. One such area is incorporation. As I show in chapter 7, Tiwi exhibits quite extensive incorporation phenomena. Inflecting verbs permit the incorporation of both nouns and verbs, and moreover, nouns can be incorporated in a number of ways, with differing morphological behaviour. Generic nominals, when incorporated, function as a core grammatical relation of the host verb and thus trigger agreement shift. However body parts do not; they are incorporated as non-core arguments and are construed as being in a part-whole relation with one of the core arguments. Nominals that are incorporated as part of a comitative or privative construction similarly are not core arguments, but are instead construed as being collocated with one of the core arguments. Both body part incorporation and comitative and privative incorporation, therefore, do not trigger agreement shift.

Verb incorporation is different from any of the other incorporation phenomena in the sense that all the others utilise the same lexical stock of incorporated nouns, and moreover, utilise the same templatic position (−2), whereas verb incorporation uses distinct forms and occupies its own unique templatic position (−4).

However all incorporation phenomena have important features in common. The form of the incorporated elements for both nouns and verbs is in general phonologically distinct from a corresponding external form. In fact, the phonological dissimilarity between bound and free forms is such that some bound forms cannot be shown to correspond to any free form. Dixon (1980:437) argues that this is due to the high degree of lexical replacement in Tiwi as a result of the extensive use of the *pukumani* ‘taboo’ system. He further claims that the high degree of dissimilarity is evidence that “incorporation developed at a considerable time-depth” (2002:429), and he points to Tiwi along with Murrinh-Patha and Aninhdhilyagka, as examples of languages that have such dissimilarity in bound and free forms.
Another feature that is common to all incorporation phenomena in Tiwi is the fact that the incorporated form is always construed as being associated with (the nature of the association varies between the different types of incorporation) the lowest grammatical function.

### 8.2 Traditional Tiwi in a cross-linguistic context

All classifications agree that Tiwi is an isolate; not demonstrably related to any other language (Dixon, 2002; O'Grady, et al., 1966; M Walsh, 1981; Wurm, 1972, 1994). Throughout this thesis I have compared the linguistic features of Traditional Tiwi with similar features in other Australian languages. There are such comparisons in all areas: phonological, morphological, and syntactic.

Phonologically, Tiwi exhibits an otherwise rare consonant, the velar fricative (§4.1.1), a feature which it shares with the Iwaidjan languages (Capell, 1962:129; Pym & Larrimore, 1979:3; Teo, 2007:5; Evans, 1998:117). The three-vowel system that Tiwi exhibits (§4.1.2) mirrors the canonical Australian vocalic inventory (Dixon, 2002:552). Many northern Australian languages, however, have evolved additional vowels. Gunwinyguan and Daly languages, for example, generally have five vowels (Dixon, 2002:630). In this respect the phonology might indicate that Tiwi is only related to Australian languages at a very deep level and, in reflecting the basic underlying pattern for all Australian languages, is linguistically conservative.

Morphologically, Tiwi has extensive features that class it together with various families of Australian languages, particularly in the north. Harvey (2003) reconstructs the bound pronoun paradigm of non-Pama-Nyungan languages, and as I show in §2.2.2, the Traditional Tiwi bound pronoun paradigm very closely resembles the reconstruction, indicating strongly that Tiwi is indeed Australian.

Tiwi pronouns exhibit a minimal/augmented number system rather than a singular/plural system. Harvey (2003) shows that this number system is the pre-existing northern Australian system. The Iwaidjan languages, which are geographically close to Tiwi, have developed a singular/(dual)/plural number system. Again, this indicates that Tiwi is linguistically conservative in preserving the pre-existing pattern.
Incorporation, as discussed above, and in detail in the previous chapter, bears a significant amount of similarity with other polysynthetic languages in Australia, such as Bininj Gun Wok (Evans, 2003), Rembarrnga (Saulwick, 2003; McKay, 1975), Aninhdhilyagwa (van Egmond, 2012), Murrinh-Patha (M Walsh, 1996; Forshaw, 2011) and Wubuy (B Baker, et al., 2010). Incorporation is also a feature of polysynthetic languages generally (M C Baker, 1996; Evans & Sasse, 2002) and may therefore exemplify convergent evolution among polysynthetic languages.

Syntactically, there are some features that Traditional Tiwi has in common with Australian languages broadly, and features that are different. As with most Australian languages, Tiwi has relatively free word order (§4.3.1). There is also no dependent marking in Tiwi; there are no case suffixes to indicate the function of a noun phrase with respect to the verb, and pronouns do not have different forms for different grammatical relations. The only means of determining grammatical relations in Tiwi is through the agreement system on inflecting verbs, which it is therefore central to the grammar. This is a common pattern for polysynthetic languages in general (M C Baker, 1996), although within the context of Australian languages, Tiwi is perhaps more extreme in lacking dependent marking of any kind.

Having said that, the data suggests that Traditional Tiwi possesses a verb phrase that consists of the verb and the object noun phrase (§4.3.1). Australian languages are not generally considered to possess verb phrases, and this is therefore an unusual finding. A less unusual finding is that Tiwi exhibits complex predicates (§4.3.4) consisting of a coverb and a verb (Amberber, et al., 2010). Complex predicates are demonstrated in several other languages in Australia’s north (Schultze-Berndt, 2000; McGregor, 2002; S Wilson, 1999; A Wilson, 2006), and their presence in Tiwi might indicate that they are part of the pre-existing Australian linguistic pattern.

The agreement system of Traditional Tiwi is one area that is considerably unusual, not just for Australian languages, but also for languages in general. The ability for agreement markers to shift in their controller from one argument to another, is something that is not attested in Australian languages, apart from a potentially similar phenomenon in Murrinh-Patha (described in §6.2.3.2). The agreement system is absolutely central to the grammar, so
agreement shift, as I have called it, is particularly strange as it subverts the entire system. Due to the fact that does not occur elsewhere in Australia in any systematic sense, it may be a relatively recent phenomenon.

To summarise, the facts as presented in this thesis further corroborate the current genetic status of Traditional Tiwi within Australian languages. Traditional Tiwi is correctly considered an isolate and not related to any demonstrated Australian language family. Any deep genetic relationships cannot be demonstrated on the current data.

It must furthermore be pointed out that Traditional Tiwi is no longer spoken. The last speakers of the language both died in 2012, shortly after the data on which this thesis is based was collected. To further improve on the description of Tiwi, more data will need to come to light. One potential source of additional data is the collection of recordings made by Marie Godfrey which, unfortunately, cannot be located. The contribution to the corpus of Traditional Tiwi recorded material that came about in the undertaking of the research for this project is significant, and almost quadruples the size of the original corpus of recordings that Osborne collected in 1966 and 1967. While it is still a relatively small body of material compared with some other Australian languages, it is substantial enough that it has allowed for a much improved description of several areas of the language. I remain hopeful that additional recorded material is found, as this will enable the improvement in the description of the grammar in several areas beyond the verb morphology.
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