

**Polysynthetic sociolinguistics:  
The language and culture of Murrinh Patha youth**

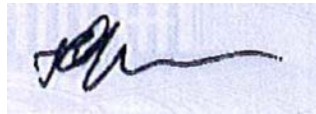
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A thesis submitted for the degree of Doctor of Philosophy of  
The Australian National University.

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Except for where otherwise stated, this thesis is entirely my own work.

Signed:

A handwritten signature in black ink on a light blue background. The signature is stylized and appears to be 'JM' followed by a long horizontal stroke.

John Mansfield

## Abstract

This thesis is about the life and language of *kardu kigay* – young Aboriginal men in the town of Wadeye, northern Australia. Kigay have attained some notoriety within Australia for their participation in “heavy metal gangs”, which periodically cause havoc in the town. But within Australianist linguistics circles, they are additionally known for speaking Murrinh Patha, a polysynthetic language that has a number of unique grammatical structures, and which is one of the few Aboriginal languages still being learnt by children.

My core interest is to understand how people’s lives shape their language, and how their language shapes their lives. In this thesis these interests are focused around the following research goals:

- (1) To document the social structures of kigay’s day-to-day lives, including the subcultural “metal gang” dimension of their sociality;
- (2) To document the language that kigay speak, focusing in particular in aspects of their speech that differ from what has been documented in previous descriptions of Murrinh Patha;
- (3) To analyse which features of kigay speech might be socially salient linguistic markers, and which are more likely to reflect processes of grammatical change that run below the level of social or cognitive salience;
- (4) To analyse how kigay speech compares to other youth Aboriginal language varieties documented in northern Australia, and argue that together these can be described as a phenomenon of *linguistic urbanisation*.

I will show that the “heavy metal gangs” are an idiosyncratic local subculture that uses foreign heavy metal bands as group totems. Social connections and loyalties are formed on the basis of peer solidarity, as opposed to the traditional

totemic system, which is structured around ancestry. Lives are now shaped by the dense (and often conflict-riven) town environment, as opposed to bush life, which was inseparable from the land.

Kigay's in-group language is a "slang" variety of Murrinh Patha (MP), which deploys new words and phrases by borrowing and reinterpreting English vocabulary. It is also characterised by substantial lenitions and deletions in the pronunciation. The MP grammatical system still underlies this speech, but some of its more complex morphosyntactic forms are restricted to the "heavy" speech of older people, and there are various mergers and reconfigurations occurring in the verb morphology.

This thesis adds to the growing body of work describing how language contact and changing sociolinguistic dynamics are radically restructuring the linguistic repertoire of Aboriginal communities in northern and central Australia. At the same time, it is one of very few studies providing sociolinguistic description of a polysynthetic language, and is therefore an innovative study in *polysynthetic sociolinguistics*.

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## Abbreviations and glossing

There are just two acronyms used repeatedly throughout this thesis:

MKK Murriny Kardu Kigay, i.e. the language of young men at Wadeye (§4.7.1)

SMP Standard Murrinh Patha, i.e. the language previously documented, as spoken by people brought up during the Mission (§4.7.1)

In addition, examples of Murrinhpatha language are cited using the following acronyms (for fuller explanation see §1.5.6):

PSE picture-stimulated elicitation

VPE verb paradigm elicitation

VSN video-stimulated narrative

Interlinear glossing conventions used in this thesis are designed to avoid clutter in the example sentences. I do this by not marking some “unmarked” grammatical features: for pronominal markers, only direct object and indirect object roles are specified – i.e. 1S.DO, 3PL.DO, 2S.IO, 1INCL.IO (§8.4.2) – while the subject role is simply glossed as 1S, 3PL, etc. Similarly for the TAM inflection of verb classifiers (§11.2), the NFUT category is treated as an unmarked category, and just glossed simply as e.g. 1S.HANDS(8), as opposed to other TAM categories e.g. 2PL.GO(6).IRR and 3S.SIT(1).PST. Classifiers are mostly glossed using a combination of their most salient semantic contribution (e.g. SIT, GO, TURN, see §8.3), and the number they are assigned in the paradigms documented by Blythe et al (2007), which is in turn based on Street (1987) and Walsh (1976). A few classifiers have no clear semantic contribution, in which case they are glossed with a number only, e.g. 1s.13. Note that the typical semantics of the classifier are not operative in every verb they classify, so in some examples the gloss for the classifier may appear quite anomalous.

Some classifiers have an underspecified number category, i.e. can be used for both plural and paucal, or both singular and dual, with suffixes completing the

encoding (§8.4.2). In these cases I gloss the classifier using the category that it signifies when functioning alone. Gender on dual and paucal number markers has two categories, of which the masculine category applies only to groups of men, while the fem category applies to either groups of women, or groups of mixed gender. I gloss the categories simply as MASC and FEM. Similarly, all pronominal categories in MP are technically either sibling or non-sibling categories (§8.4.2), however I treat the non-sibling category as unmarked, and add a SIB gloss to the sibling category.

Morphological structure in examples is marked as either affixal (-) or clitic (=) dependencies. Both of these are used for morphemes that are “bound” in the sense that they do not have the character of independent words, but clitics are distinguished from affixes in being able to attach to a range of constituents.

*Noun classifiers (§4.7.1; see also verb classifiers §8.3.1)*

da	PLACE, TIME	Places and periods of time
kardu	PERS	Socially recognised (usually Aboriginal) people
ku	ANIM	Animals, meat, body parts, spirit beings, non-socially recognised humans
kura	WATER	Water and water-based liquids
mi	VEG	Consumable plant matter: fruit and vegetables, tobacco and marijuana
murriny	LANG	Languages, names, stories, songs
nantji	THING	Miscellaneous inanimate objects
thamul	SPEAR	Types of spear
thungku	FIRE	Fire, firearms and electricity
tju	WEAP	Weapons

*Interlineal glossing abbreviations*

1S	first-person singular	IMPF	imperfective (alternative gloss used for serial verbs in some contexts, to emphasise imperfective function)
2S	second-person singular		
3S	third-person singular		
1PL	first-person plural etc.		
1PC	first-person paucal etc.	INSTR	instrumental
1INCL	first-person and second-person inclusive (no number distinctions)	IRR	irrealis
		ITER	iterative
1S.DO	first-person singular direct object	LOC	locative
		MASC	masculine
1S.IO	first-person indirect object	NEG	negator
		PC	paucal
ADJ	adjective	PERL	perlative
ADV	adverb	PPL	people
ANAPH	anaphoric	PRSNL	presentational
ARG.NUM	argument number (either subject or object)	PROX	proximate (close) demonstrative
DAT	dative	PST	past
DEF	definite	PSTIRR	past irrealis
DIR	directional	RR	reflexive/reciprocal
DISTAL	distal demonstrative	RDP	reduplicant
DUAL	dual	REL	relativiser
EMPH	emphatic	SER	serial verb
ERG	ergative	SIB	sibling
FEM	feminine, or mixed gender group	TAG	tags, either = <i>ya</i> or = <i>yu</i> , which are encliticised to various words, and the function of which remains unclear
FUT	future		
FUTIRR	future irrealis		
HITH	hither (towards speaker)		
IBP	incorporated body part	TOP	topic
IMM	imminent		



## Introduction

### 1.1 Mendi, and the beginnings of this research

Mendi<sup>1</sup> is 26 years old, a father of two, and lives in a small yellow house with his mother, sisters, brother, nieces and nephews. The house is a tired-looking breezeblock construction, with wire mesh for windows, and for the avoidance of doubt, the letters EW (“Evil Warriors”) are written large on the outside wall. Affiliation to the Evil Warriors group is important to Mendi: it’s part of who he is, and he criticizes as cowards those who have been less loyal. But perhaps even more important for Mendi is his affiliation to Kreator, a smaller, more tight-knit group that represents only his close kin (§2.7).

Mendi has been to prison at least three times, for fighting, theft and domestic violence. But this is not unusual in Wadeye, where Mendi is a pretty typical young man. He has few material possessions, and doesn’t care much to have them; sometimes I’m not sure if he really “owns” anything except for the clothes on his back. But he fiercely defends his reputation, his image, and his relationships with those who matter to him.

As a general rule, Mendi does not much like whitefellas. Perhaps because of this, he has many times let me down when our arrangements come into conflict with the behaviour expected of him as Kreator mob. In turn my whitefella<sup>2</sup> ways

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<sup>1</sup> A pseudonym.

<sup>2</sup> I use the term *whitefella* in the sense it is used by Aboriginal people at Wadeye – not so much a reference to race as a cover term for all things considered to be non-Aboriginal (§3.8.1).

<sup>3</sup> I use the term *whitefella* in the sense it is used by Aboriginal people at Wadeye – not so much a reference to race as a cover term for all things considered to be non-Aboriginal (§3.8.1). The spelling with *ifella* is in fact more consistent with the spelling system used in this thesis, but I follow the *in* spelling since it is better established both at Wadeye and in published records – also as “Murrinh-patha” and “Murrinhpatha”. Some older records (e.g. work by Stanner) use the spelling “Murinbata”.

<sup>4</sup> Funds used to make these payments were partially provided by Thamarrurr Development

sometimes anger him; but we are friends. When I left Wadeye after my first stay of 6 months, Mendi called me every day, multiple times a day. I would pick up the phone and he'd ask:

M: Ngarra thanam?

*Where are you?*

JBM: Adelaide nganam. Nyinyi-ka?

*I'm in Adelaide. How about you?*

M: Ngarra da.

*I'm at home.*

Then we'd go quiet, and just stay on the line for a while. I might try to explain something of what I was doing, fumbling between Murrinh Patha and English. I think we were both mystified or bemused by the friendship we had formed.

When Mendi speaks to his kin, he effortlessly deploys a grammatical code that is almost implausible in its subtlety and refinement. He draws on a deep history of conventionalized patterns by which verbs have been elaborated to the point where they can express entire sentences. *Thanamngiwutjputj* he said to me one day, and he had to repeat it, then translate into English, because I struggled to understand: "You keep pissing me off". I had again refused when he asked for \$20, a typical example of how my ethics clashed with his (Notes, 2013-07-20).

But Mendi will be the first to point out that he is not capable of "heavy speech", which is to say that there are forms of verbal elaboration commanded only by the old people, of whom there are fewer every year. And neither should he aspire to heavy speech, since he is Mendhe on his father's side, and Magati Ke on his mother's side, so Murrinh Patha is not really his language anyway, he's just borrowing it. Tradition has instilled in him the idea of his own speech as deficient. He no doubt relishes the quick, difficult-to-follow slang he speaks with



the Kreator mob, but it has never occurred to him that outsiders would see this as beautiful, complex or worthy of study.

Mendi was the first person who took an interest in me at Wadeye, opening just a crack in the door so that I could begin to investigate the life and language of young men in the town. This thesis lays out my findings so far, which can be grouped under four inter-related research goals:

- (5) To document the social structures of day-to-day life for young men like Mendi, including the subcultural “metal gang” dimension of their sociality;
- (6) To document the language that they speak, focusing in particular in aspects of their speech that differ from what has been documented in previous descriptions of Murrinh Patha;
- (7) To analyse which features of their speech might be socially salient linguistic markers, and which are more likely to reflect processes of grammatical change that run below the level of social or cognitive salience;
- (8) To analyse how their speech compares to other youth Aboriginal language varieties documented in northern Australia, and argue that together these can be described as a phenomenon of *linguistic urbanisation*.

The young Aboriginal men of Wadeye – known locally as *kardu kigay* (§2.2) – have developed an idiosyncratic local subculture that uses foreign heavy metal bands as group totems. Social connections and loyalties are formed on the basis of peer solidarity, as opposed to the traditional totemic system, which is structured around ancestry. Lives are now shaped by the dense (and often conflict-riven) town environment, as opposed to bush life, which was inseparable from the land. Kigay’s in-group language is a “slang” variety of Murrinh Patha (MP), which deploys new words and phrases by borrowing and reinterpreting English vocabulary. It is also characterized by substantial lenitions and deletions in the pronunciation. The MP grammatical system still underlies this speech, but some of its more complex morphosyntactic forms are

restricted to the “heavy” speech of older people, and there are various mergers and reconfigurations occurring in the polysynthetic verb.

Thus a series of grammatical, lexical and phonological dimensions of variability are opened up between “traditional” MP and a new, urban style of speech. These variables promise to elucidate how different ways of speaking are associated with people’s social position in Wadeye, and with particular stances that people might take in social interaction. In this thesis I do not present a comprehensive point-by-point comparison of kigay’s speech and what had been earlier documented, but rather a selection of the most salient features:

- Use of English/Kriol-derived lexicon, which is variably integrated into MP phonology (§6);
- Lenited pronunciation of /p/ and /k/ phonemes in syllable onsets (§7);
- Phrasal verb constructions used instead of the polysynthetic verb (§9);
- Reordering, and variable absence, of inflectional morphology in the polysynthetic verb (§10);
- Merging of morphological tense-aspect categories (§11).

I have identified variable features in all these areas of the language, though only some of them provide sufficient data for rigorous quantitative analysis. But nonetheless strong themes emerge from the data: lexical and phonological innovations are associated with the youthful, urban speech, and show more evidence of being socially marked. Some morphological mergers and reconfigurations in the polysynthetic verb do not appear to carry any social significance, but within a few decades have become core parts of the grammar. Other elements of typologically unusual and syntactically complex verb morphology do appear to be associated particularly with a “heavy” style of speech that is only used by older people, and is probably in decline.

### *1.1.1 Comparison to previous studies*

This thesis contains elements of ethnographic description, linguistic anthropology, variationist sociolinguistics and grammatical analysis. In subject matter it is most closely related to the growing body of work describing how language contact and changing sociolinguistic dynamics are radically restructuring the linguistic repertoire of Aboriginal communities in northern and central Australia (Amery, 1985; Langlois, 2004; Lee, 1987; McConvell & Meakins, 2004; O'Shannessy, 2005; Schmidt, 1985). Of these works it is perhaps most similar to Amery's description of Dhuwaya and Langlois' description of Areyonga Teenage Pitjantjatjara, which describe vibrant Aboriginal languages that are incrementally changing, rather than mixing with or shifting to Kriol. On the other hand, Amery's and Langlois' studies are more like reference grammars of youth languages (§12.4.2), whereas mine takes a more selective approach to grammatical description, but includes more extensive work on ethnography and sociolinguistic variation. Alongside previous work on Tiwi (Lee, 1987) and Navajo (Schaengold, 2004), this thesis is one of very few studies describing sociolinguistic variation in a polysynthetic language.

The degree of ethnographic analysis offered in this thesis is not found in any other study of a youth, town-based Aboriginal language, though Sutton (1978) provides extensive ethnographic detail in his study of traditional dialects around Cape Keerweer. The quantified study of sociolinguistic variation deployed in this thesis has only very occasionally been applied to Aboriginal languages (e.g. O'Shannessy, 2009), and is rare among studies of small languages more generally (Stanford & Preston, 2009). For this dimension of my work I therefore rely largely on models found in research on cosmopolitan languages, such as Eckert's (2000) study of how different ways of speaking are socially distributed in an American high-school, Labov's (1972) study of in-group linguistic markers among African-American gangs in New York City, and Mendoza-Denton's (2008) study of Latina gang speech practices. These and other detailed studies of American urban sociolinguistics represent a point of analysis to which I aspire, though this thesis falls far short of them. Sociolinguistic studies of cosmopolitan

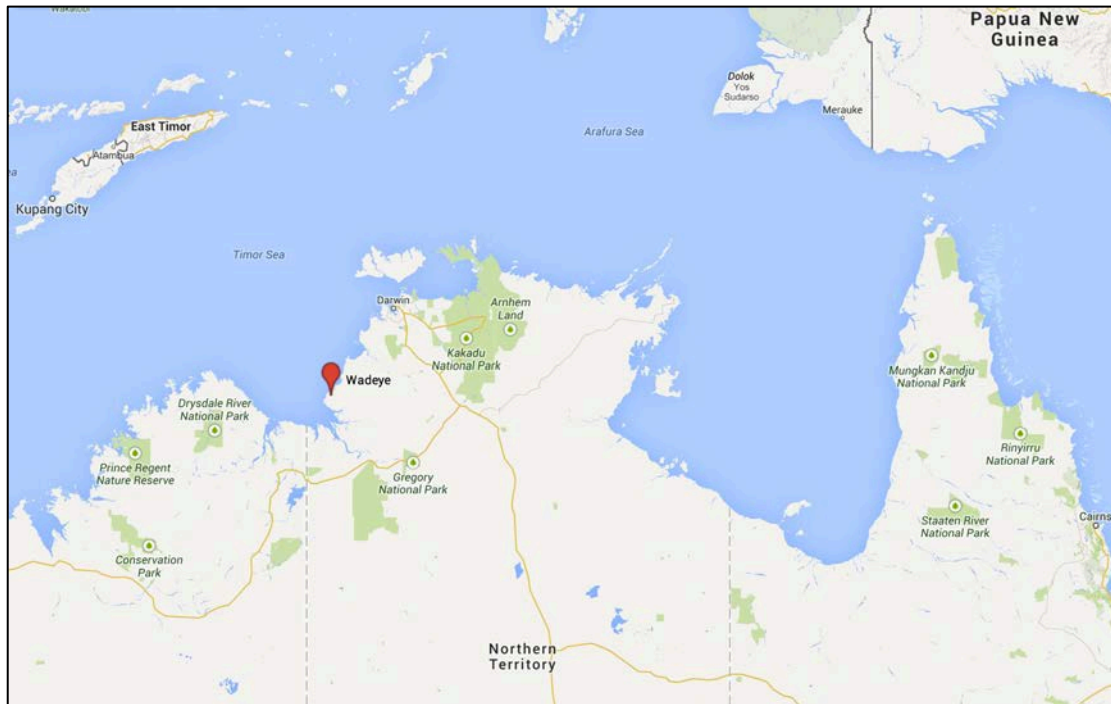
languages investigate languages for which the grammar and phonology is well understood, social settings that have been voluminously analysed, and usually focus on sociolinguistic variables that have already been identified. By contrast, much of this thesis is restricted to laying such groundwork, especially the identification of variable linguistic features. On commencing this research I severely underestimated how much basic grammatical and phonological analysis would be required, on the basis that MP is a “moderately” well-described language. Only in the course of this project have I realized that the study of sociolinguistic variation requires very *detailed* and *precise* description of the linguistic features in question (§1.3.1).

## 1.2 Wadeye

Wadeye is one of Australia’s largest Aboriginal towns, in the sense of having a majority Aboriginal population, a distinctly Aboriginal foundation history, and being generally recognised within the town as standing on Aboriginal land – in particular, the land of the Dimirnin clan. Its population is now about 2500, of whom the vast majority are Aboriginal people from the traditional clans of the area (Taylor 2010: 8). The town lies on the edge of coastal mangroves between Darwin and the Kimberleys, and was originally founded as the Port Keats Mission in 1935. By the 1950s, some twenty Aboriginal clans who had populated the area between the coast and the Moyle River had moved in, voluntarily, to reside permanently at the Mission. In 1975 the Mission was dissolved and the secularised town was officially renamed as Wadeye (Pye, 1972, n.d.).

Although Wadeye has opened up somewhat to whitefella influence in the post-missionary period, most visitors – even those familiar with other Aboriginal towns – remark upon its air of separateness (e.g. Hawley 1981; Toohey 2004; Shand 2006). Wadeye’s distinctiveness is exemplified above all by its vast population of young people, who all speak Murrinh Patha but are often not comfortable communicating in English, or indeed, dealing with whitefellas at all. At least part of the explanation for these facts must lie in the geographic isolation

of the town, with access roads that are very rough for half the year, and under water for the other half.



**Figure 1.2.1 Wadeye, northern Australia**

Numerous newspaper reports describe “riots” in post-missionary Wadeye, and the older people in town prefer not to say much more than that the decades after the Mission were *da wiye* (“a bad time”). There is still regular fighting among groups of kigay, and it is probably fair to say that throughout the entire period since the end of the Mission, the town has had an extended crisis in authority, social cohesion and public order. When Mission governance ended, neither mainstream Australian governance nor experiments in local Aboriginal leadership were successful in establishing a new order (Ivory 2009); this is combined with a demographic boom resulting in a town population where kigay outnumber men over 50 by a ratio of ten to one (Taylor 2010: 12).

### 1.3 Murrinh Patha

The Murrinh Patha language (MP, also spelled Murriny Patha<sup>3</sup>) is spoken by virtually all Aboriginal people in Wadeye, as well as smaller numbers of Aboriginal people in other regional locations, giving it a total speaker population of 2500–3000. This makes it one of the most vibrant Australian Aboriginal languages, and also one of very few that are still being learnt by children as their first language.

MP was for some decades treated as a linguistic isolate, until Green (2003) showed that it is genetically related to the nearby (but non-contiguous) Ngan'gi (Reid, 1990). The languages of the Daly region have enough grammatical similarities that they have been described as forming a *sprachbund* or “linguistic area” (Dixon, 2002), but apart from Ngan'gi none of the Daly languages have been shown to have a genetic relationship with MP, so at this point it can only be categorized with the rather miscellaneous “non-Pama-Nyungan” languages of the northern Australian tropical fringe (Evans, 2003).

Typologically, MP is most notable for its morphologically complex, polysynthetic verbs. All the arguments of a clause are marked on the verb using three series of “subject”, “direct-object” and “indirect-object” pronominal markers, along with inflections further specifying the number of such actors, and tense/aspect/mood properties. Further complexity arises when adverbial “endoclitics” are incorporated into the verb, and body-part nominals are compounded with the verb root. But perhaps the most complex dimension of the MP verb is the relationship between *verb classifier* and *verb root* morphemes, both of which are required for most predicates. The following predicate involves a *helping* action (verb root), typically performed with the *hands* (verb classifier):

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<sup>3</sup> The spelling with “ny” is in fact more consistent with the spelling system used in this thesis, but I follow the “nh” spelling since it is better established both at Wadeye and in published records – also as “Murrinh-patha” and “Murrinhpatha”. Some older records (e.g. work by Stanner) use the spelling “Murinbata”.

- (1.3.1) **mem-nintha-manpi**=kanam  
 3DU.HANDS.RR(11)-DU.MASC-**help**=BE(4)SER  
*the two men are helping each other* (MbM, VSE\_3-11)

The interaction of morphemes within the verb is precise and highly codified, but the structure of the sentence beyond the verb is quite the opposite. There are few rules for word ordering, except that complex noun phrases, when they are used, are left-headed. But nominal elements are elided to a very great extent, and when included, are often expressed using highly generic terms. Murrinh Patha has a ten-part noun classifier paradigm (§4.7.1), but these classifiers are often used alone as generic nouns, with the specific semantics of the referents left to be completed by context. In the following transitive sentence, the subject, a white woman who has just appeared on the scene, is specified only by the ANIM “animate” noun classifier *ku*, while the object, two men who have been carrying a piano since the beginning of the narrative, is indicated only by a bound object pronominal / number combination on the verb.

- (1.3.2) yingam-**wunku-dala-dala-nintha** **ku** dji-kathu-wa  
 3S.AGGREGATE(25)-3DU.OBJ-block-RDP-DU.MASC ANIM DIST-SOURCE-EMPH  
*that white lady is blocking the two men* (MM, 2011-09-13, 3-11)

MP undoubtedly has a large vocabulary for labelling the variety of natural species in the region, but for other types of nouns and adjectives, I have the impression that a small range of lexemes is used. For example the labelling of something as “good”, “appropriate”, “functioning”, “useful”, “healthy” etc. seems to come down almost exclusively to the adjective *patha*. Or again, the labelling of “wood”, “tree”, “branch”, “twig” etc. is limited as far as I know to *thay* – though to some extent the noun classifiers can be used to create more specific meanings from the same noun, e.g. *thungku thay* FIRE + stick “firewood”, *tju thay* WEAPON + stick “fighting stick” (Walsh, 1997b). However my proposal that MP uses a limited nominal vocabulary is highly impressionistic, and much more study would be required to determine how it compares to other languages in the world, or other languages in Australia (cf. Blake, 1981, pp. 23–27).

On the other hand, the paradigm of personal pronouns in Murrinh Patha is highly specific. Grammatical number distinguishes singular, dual, paucal and plural, with an added masculine/feminine gender distinction in most categories (with the “feminine” category also covering groups of mixed gender). There is also a distinction between first-person exclusive and inclusive forms (as is typical for Australian languages), but more unusually, there are distinct dual and paucal forms for groups of people who are related to one another as classificatory siblings. This brings the total size of the person/gender/number/siblinghood pronominal paradigm up to 28 (Street, 1987, pp. 80, 99).

MP has a simple four-vowel system, while the consonant inventory is fairly simple in terms of manners of articulation, though there are a large number contrastive places of articulation: bilabial, dental, alveolar, retroflex, palatal and velar. Syllable structure is fairly simple (CV, CVC or occasionally CVCC), but stress patterns on polysynthetic verbs are complex enough that they have so far eluded analysis.

### *1.3.1 Existing studies of Murrinh Patha*

The degree of grammatical documentation currently available for MP is moderate – far from “undocumented”, but with thorough description still wanting for some core elements. The earliest general study is by the missionary Father Flynn (1950), which is superseded by Walsh’s (1976) PhD thesis. Street’s “Introduction to the language and culture” (1987) provides a selective sketch, and Chapter 6 of Blythe’s (2009) thesis is a grammatical sketch focusing on denotation. About a dozen further articles and book chapters describe various aspects of MP grammar, including phonology and phonetics (Butcher, 2004; Street & Mollinjin, 1981), verb morphology (Forshaw, 2011; Nordlinger, n.d., 2010; Nordlinger & Caudal, 2012; Seiss & Nordlinger, 2010; Walsh, 1987, 1996a), nominal predicates (Walsh, 1996b) and noun classifiers (Walsh, 1997b). Blythe has published a series of studies showing how various grammatical



structures, especially person reference and kinship, emerge in discursive interaction (Blythe, forthcoming, 2009, 2010a, 2010b, 2010c, 2013), and there is currently a substantial project underway investigating language acquisition (Forshaw, 2013; Kelly, Wigglesworth, Nordlinger, & Blythe, 2014). There is a bidirectional dictionary compiled by Street (2012), with approximately 2300 headwords on the MP → English side, and Seiss (2011, 2012) has developed a computational morphology analyser.

When I started writing this thesis I did not foresee that my work would include much grammatical description of “traditional” Murrinh Patha as spoken by older people at Wadeye. I assumed that the descriptions found in the literature mentioned above would be sufficient, and these could simply be referenced and summarized as a point of comparison for the speech of kardu kigay. I did not realize at that point how much grammatical detail is needed to analyse variation and change. Variation and change happen through incremental modification of fine details, with forms of speech that are not used by some speakers being used by others, or graduating over time from being “incorrect” to marginally acceptable to quite normal. Such marginal phenomena are reported only in the most detailed grammatical descriptions. Furthermore, an understanding of how the internal dynamics of a language facilitates change and variation also requires very detailed description: for example, an understanding of how the sound /k/ becomes lenited to [x] requires quite a detailed description of how /k/ is “normally” pronounced in the first place; or again, an understanding of how verb suffixes are shifting their phonological form and sequential order requires detailed knowledge of their earlier form(s) and order(s).

It is for this reason that the thesis contains two substantial chapters (§5 and §8) that discuss traditional MP in some detail, focusing on phonology and verb morphosyntax respectively. However, even with these chapters in place, there are still some points in the discussion of kigay’s speech where open-ended questions remain as to how much a certain feature is *new*, or whether it has simply not been documented in the traditional language. Some of these questions

will only be resolved once we have very detailed descriptions of traditional MP available; some will probably never be resolved.

#### **1.4 Field methodology**

I am 34 years old, a whitefella, an urbanite, with no very fixed abode, but almost limitless opportunities in the technology-driven, post-industrial economy. I began field research for this thesis with a deliberately open-ended approach, having decided to research the life and language of kardu kigay precisely because the scraps of information available to me were enigmatic and intriguing. I avoided formulating specific hypotheses or research questions because this would prejudice the sort of information I would be disposed to uncover; instead I took open-ended observation as my starting point and allowed research topics to emerge heuristically.

When I arrived in Wadeye in April 2011 I had one (whitefella) contact who helped me enormously with practical matters, but in terms of developing relationships I was mostly left to my own devices. My initial technique was simply to walk around town, two or three times a day, to make myself visible to people and to talk to anyone who seemed willing. I took these walks for about two weeks before I had my first substantial conversation with young men; this led to joining them for football games in the afternoons, which was a good way of gradually getting to know people, especially since we had limited verbal communication (see §4.5). I developed trust and familiarity with this network of kigay until after about a month I began to discuss language research with some of those I was closest to. This led to another phase in which various kigay would verbally agree that they wanted to do language research with me, and would meet me the next morning to begin work. But no one ever turned up. This went on for some time, and took me quite close to the point of despair, until eventually after two months at Wadeye I made my first recording. After a further month of essentially failed recording sessions, I finally made my first *useful* recordings of kigay speech in July 2011.

I spent six-and-half months at Wadeye on my 2011 visit, then returned for various shorter visits throughout 2012 and 2013, overall spending about 15 months in the town. My relationships with kigay have gradually strengthened, but there has always been, and still remains, some residue of distrust and even hostility among those who don't know me. As my ethnographic research unfolded I made very little use of formal data collection methods: there are just two recorded interviews in a question-answer format (SM 2011-09-21, MN 2012-01-12), two occasions on which I elicited kinship data from kigay, a few occasions on which I asked kigay to help me map out "mob areas" around town, and a list I gradually compiled of kigay's clan and mob affiliations (§2.8). I did not make extensive use of any sort of question-and-answer data collection, because I soon noticed that kigay are uncomfortable with too many direct questions, and usually respond with minimal or unreliable answers (cf. Von Sturmer, 1981; Walsh, 1997a). I eventually began to relish the slow but rewarding process of learning from kardu kigay: information is not available "on demand", but instead is given, often unexpectedly, when the informant feels that the time is right. My main ethnographic data, then, is firstly my collection of unstructured field notes, which I wrote up in the evening most days in the field, and total 75,000 words or some 200 pages. Secondly, the conversational and narrative recordings I made all double as ethnographic data, since almost everything said in these sessions in some way elucidates kigay's worldview, or often reports directly on the facts of their day-to-day lives.

Verbal communication between kigay and myself was often unreliable. A minority of kigay speak fairly fluent English, but most are somewhere between rudimentary and intermediate levels (§4.5), and it was important for me methodologically to avoid focusing my research on those who have unusually strong English. Therefore our verbal communication was somewhat faltering, especially at the beginning of my field research, but gradually became clearer as I learnt some MP, and my main collaborators' English also improved through sustained interaction. I put great effort into learning MP during my field visits (one of my initial motivations for studying linguistics was simply that I enjoy

learning languages), but it is a very difficult language, at least for an English speaker. By 2013 I was able to use a moderate amount of MP in conversational interaction, though with many grammatical errors, and heavily mixed with English for all those things I do not know how to express in MP.

Kigay have little familiarity with my native habitat: cosmopolitan cities, educational institutions and the paraphernalia of literate scholarship. Their understanding of my project was therefore quite approximate, and in general they were not curious to know details of my activities, though it was common for kigay to ask about my motivations and about who would be able to hear recordings of their speech. I would usually explain either that (a) I had come there to learn MP; or (b) that I was writing a book about kigay's language. Some of the kigay who knew me best began to act as spokesmen for my research, and would usually field questions:

KM: Thangkunu nukunu wurrini kanyi-thu?

*Why did he come here?*

DP: Nangkal-yu?

*Who?*

KM: John.

DP: John? Nukunu wurrinidha kanyi-thu kardu kigay karda-nu-ya. Murrinh manitjpirr karda-ya. Purdumayitjnu-mini.

*John? He came here for kigay like us. For this language I think. We'll try to teach him.*

(KM/DP, 2012-06-20\_25)

Many of kigay's regular activities are illegal, and are subject to some degree of social disapproval both inside and outside Wadeye – especially fighting, break-ins, vandalism, gambling and marijuana smoking. The first three of these are acknowledged by kigay themselves to be “bad” activities, while gambling and marijuana smoking are seen to have a mixture of good and bad qualities, and are

quite socially acceptable in many Wadeye households. These activities caused some problems in that kigay initially presumed that I would take a negative or judgmental view of them, and therefore rejected my presence in their home environments. Kigay repeatedly invited me to share “bucket bongs” with them, until it became obvious to me that at least token participation in this ritual was an important way of showing solidarity with them. Fighting and marijuana are also some of the main topics that kigay talk about in casual conversation, and this caused difficulty in some recording sessions where kigay felt that these things should not be talked about for a language recording, and so reverted to rather sterile accounts of bush life and hunting trips, on which topics they actually had far less to say. A breakthrough came when one day two kigay sought me out requesting a recording session, in which they gave animated and detailed accounts of a recent fight between Evil and Lica mobs (2011-09-01\_DP-PP). Afterwards I explained to them that this recording was much better because it had more “action” and “interest”, and thereafter I made further recordings of similar quality, though to some extent a converse problem emerged in that some kigay interpreted my interest being in fighting in particular. The illegal activities discussed by kigay mean that a few of my recordings, as well as my fieldnotes in general, cannot be made available yet for archival access (§1.5.7).

I have been sensitive to the possibility that my ethnographic research might be viewed as voyeuristic or sensationalist, given the pervasive violence and illegality of the kigay’s lifeworld. There is some degree of truth in this charge: my interest in this particular group of people was sparked in part by sensational media reports of “Aboriginal heavy metal gangs” (§3.3) – but taking an interest in exotic violence need not lead to superficial or demeaning representations. I justify my focus on kardu kigay by giving a nuanced and humanizing account of how they live, trying to represent as much as possible how they might view things. Since violence has a major role in their world, it would be misleading or evasive to exclude this from my ethnographic description. This thesis follows a period in which the reporting of violence and abuse in Aboriginal communities has been a contentious issue in Australian anthropology. Sutton (2009) has been most prominent in arguing that failure by anthropologists to report on violence

in remote Aboriginal communities colludes in the perpetuation of such violence; in response various critics have argued that Sutton's work contributes to negative views of Aboriginality, and that reporting on violence must be balanced with concerns for people's privacy (Austin-Broos, 2010; and other papers in Altman & Hinkson, 2010). In my view this is a good reason for anonymising my data, except for when individuals expressly desire to be mentioned by name. For researchers who observe violence and abuse in very small remote communities or out-stations even anonymising individual identities may still expose the community as a whole, but for a town as large as Wadeye, I consider the idea of a not just individual, but communal "right to privacy" to be highly problematic. This is clearly also related to the "politics of representation": there is an unpleasant hint of colonialism in the fact that the representations of Wadeye contained herein are produced by a whitefella and not by a local Aboriginal person. However for the moment, the Aboriginal people of Wadeye are not particularly concerned with representing themselves to the outside world, or at least not in a written medium, and I do not believe that therefore no one should write about them. I satisfy my own ethical standards in this work by seeking to avoid moral judgment, but also by avoiding the romanticisation or sterilisation of kigay's actions and motivations.

There were other practical difficulties and conflicts I encountered in my fieldwork. Firstly, there is considerable segregation between whitefellas and Aboriginal people in the town, including an unwritten rule in many of the whitefella residential compounds that forbids entry to Aboriginal people. I broke this rule on a number of occasions by inviting Aboriginal visitors, and accordingly had some difficulty in finding stable accommodation. But Aboriginal people also participate in this segregation, often showing discomfort or hostility towards a whitefella visiting their homes, and there was never any question of me being able to stay in an Aboriginal household. Between the two I often felt quite lonely, since I had no desire to fraternize with most of the Wadeye whitefellas, but on the other hand was only accepted by the Aboriginal people at arm's length. There were additional limitations in how I might be accepted among the various interlinked Aboriginal social networks in the town. My

gradual engagement with a certain network of kigay as described above placed me firmly within the Evil Warriors sphere, and accordingly made it more difficult for me to engage with groups affiliated to Judas Priest. Attempts to be socially “neutral” did not gain much credibility among the kigay, who are fiercely loyal in their relationships. My desire to acquire broad sociolinguistic samples constantly led me to seek relationships or at least recording sessions with a greater range of kigay around town, but this often caused jealousy, conflict, and perhaps a sense of betrayal among those who had made the most effort to accept me.

### **1.5 Language data**

Most studies of Australian Aboriginal languages are based on the speech of a handful of individuals – sometimes by necessity, since these may be all the speakers left for the language (Evans, 2007). But in this study, with the luxury of many more living speakers, and a specific interest in inter-speaker variation, I draw on the speech of about 40 individuals. I have also made an effort to collect a range of different speech types, which can be most broadly categorised into *structured datasets*, which involve multiple speakers saying more-or-less “the same thing” as provoked by experimental stimuli; and *natural speech data*, which essentially involves leaving a recording device running while speakers say whatever they want. The structured data has the advantage of establishing controlled comparability between different speakers, while the natural speech data has the advantage of better representing the kind of speech that kigay use beyond the reach of the recorder.

Three sets of structured data were collected, one using videos as stimuli, and one using still images, and one using English and MP to elicit verb classifier paradigms. More comprehensive English-based elicitation – i.e. asking people to translate into MP words or sentences that I provide in English – had very little part in my research. This is often a core method used to analyse Aboriginal languages, as it offers an efficient and focused method for discovering vocabulary and grammatical patterns. However it was much less effective in my research,

because of the aforementioned limitations in kigay's English, and because kigay are generally not comfortable being asked "how to say something". Apart from the very practical problem of imperfectly understanding the elicited English sentence, kigay do not see themselves as having authority in speaking MP (§4.8). However some small amounts of English-elicited data appear in my field notes, mostly from the final months of my research, after I had developed more trust with certain kigay, and they had begun to see themselves as competent if not authoritative language consultants.

The natural speech data does not fall into any kind of sets, but rather covers a broad spectrum from sessions where one speaker delivers a connected narrative, to sessions dominated by gossip and joking, and some rather dysfunctional sessions full of uncomfortable silences.

Almost all recording sessions made for this thesis involved payments to speakers of \$25–\$50. Aboriginal people at Wadeye see language as a valuable commodity, and generally expect to be paid if they are recorded. Three kigay also worked with me very extensively to transcribe the recordings, for which they were also paid.<sup>4</sup> This was an important experience for all three kigay, none of whom had done extensive paid work prior to this, and all of whom developed considerable skills and confidence over the course of the project.

### *1.5.1 Video-stimulated data*

Between July and October 2011, when I first began to develop relationships to the point that I could successfully record kigay's speech, I recorded video-stimulated narratives with 23 kigay, as listed in Table 1.5.1. Each session had two participants, one of whom narrated the contents of video stimulus Set A, while the other narrated Set B. Each set comprised 12 videos ranging from 10

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<sup>4</sup> Funds used to make these payments were partially provided by Thamarrurr Development Corporation, Wadeye, and the Australian National University, with the remainder paid for by the author. The funding provided by these institutions is deeply appreciated.



seconds to 4 minutes in duration. The videos were drawn from various sources, listed in Appendix 1; the most successful were the Charlie Chaplin and Mr Bean videos, the videos of 4WD vehicles in difficult situations, and the fragments from *Fantasia*. All of these usually stimulated engaged, colourful narrative from the kigay. Each stimulus set also included a cluster of four still images depicting “animals biting animals”, which I included specifically to test whether ergative marking would be used.<sup>5</sup>

Recording date	Speakers Set A	Speaker Set B
2011-07-19	CM (22, Evil Iced Earth)	DB (21, Evil Killswitch)
2011-07-21	DP (26, Evil Kreator)	CM (22, Evil Iced Earth)
2011-07-22	KM (21, Evil Hatebreed)	AnB (18, Evil Iced Earth)
2011-07-25	LP (22, Evil Megadeth)	GLM (18, Priest)
2011-07-26	JC (27, Evil Tera)	MkM (24, Evil Tera)
2011-08-01	RT (30, Evil Bullet)	FA (30, Evil Tera)
2011-08-08 *	SL (47, Evil White Lion)	PM (45, Evil Bullet)
2011-08-21	GbM (18, Evil Bullet)	MK (22, Priest)
2011-08-25	XM (18, Evil Bullet)	DM (24, Evil Bullet)
2011-08-30	GrM (26, Evil Megadeth)	AM (30, Evil Megadeth)
2011-08-30	SB (23, Lica Priest)	CK (19, Lica Priest)
2011-10-10	LD (28, Machine Head Priest)	RD (24, Machine Head Priest)

**Table 1.5.1 Video stimulated narrative recordings**

**\* Speakers in this session are marginal to the kigay age range (about 13–45, see §2.2); data from their speech is not generally used for illustrating MKK.**

In each session the kigay sat on opposite sides of a table, with one kigay facing a laptop computer and microphone. In this arrangement only the narrating kigay could see the screen, and so the second participant depended on him for details of what was transpiring in the video (Figure 1.5.1). The sessions were designed in this way to ensure that most of the speech would involve actual verbal communication from one kigay to another, rather than more artificial forms of

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<sup>5</sup> It was, though this finding turned out to be rather peripheral to the topics addressed in the thesis.

audience-less speech, or worse of all, speech directed at the uncomprehending linguist. The microphone, which delivered its audio data to a video recorder on a tripod, was placed so as to capture the best sound quality possible without giving the speaker any sense of “speaking into the microphone”. The resulting sound quality is quite good – though not at a standard permitting the study of fine phonetic detail.



**Figure 1.5.1 Using video to prompt narrative. DP, on the right, narrates a video from the laptop to CM on the left (VSE-2011-07-21). The child looking on (face blurred for privacy) is not properly a participant in the session.**

The video-stimulated narratives were in general quite successful, though the style and pace of speech is somewhat inconsistent, with some narratives in stilted monotone, and others in a much more animated vernacular. However this substantial dataset has not been used extensively in the thesis. The recordings are successful in the sense of capturing a vernacular style of speech, but this turns out to be so heavily lenited that it is often difficult to transcribe accurately. At a minimum, each recording needs to be worked through very slowly with one of the kigay to produce a transcription (see below) – and in many cases multiple passes with multiple transcribers are required to clarify the more mysterious utterances. The result is that only about 20% of this data has been transcribed. It is not the main dataset used for any part of the thesis, but it is drawn on to some

extent in analyses of lexical borrowing and phonological integration (Chapter 6) coverbs (Chapter 9) and verb suffixes (Chapter 10).

### 1.5.2 Picture-stimulated elicitation

The second structured dataset I collected set out to capture careful, self-conscious speech. The difficulties and limitations I found with the video-stimulated data led me to decide that I would need to come to grips with kigay's careful speech style before I could more accurately and efficiently transcribe their vernacular. I achieved this by asking kigay to say what they saw in a series of still images, encouraging them to speak *lurrutj* "strongly" and *tarangka* "clearly" into a microphone. The recordings were made using audio rather than video, since gesture and physical interaction were minimal in this setting.

The picture elicitation set comprised approximately 100 photographs, each selected to unambiguously illustrate a particular noun or verb. With the nouns I asked *thangku nantji kanyi* "what is this thing?" (or some close variant thereon), and with the verbs I asked either *ngarra mam-dim* "what is he/she doing?", *ngarra mananu* "what is he/she going to do?", or variants thereon, as well as sometimes asking, secondarily, how the same thing would be said with reference to yesterday. The method was successful in eliciting the targeted words, though there were a few pictures that proved too ambiguous, and were either changed or discarded after the first few sessions.

I recruited participants for this data collection simply by asking kigay in the street if they would like to participate, making sure that there were plenty of participants from outside the social network with which I was most familiar. The 26 recording sessions gathered in this way (Table 1.5.2) contain very similar, though not identical, collections of words and morphemes. Slight changes were made to the picture set as I progressed, and it was not possible to closely control the words produced: in particular, I could find no way of coercing speakers into giving either single-word forms, or words in carrier sentences. Some speakers

tended towards single words, noun-phrases or verb-phrases, while others almost always provided full sentences. I had no choice but to accept this mixed data in my sample, though I do not consider that it has caused any distortions, since the mixed types are fairly evenly spread across the full dataset.

Date	Speaker	Date	Speaker
2013-01-02	MJ (24, Priest)	2013-01-14	FN (27, Priest)
2013-01-03	OB (28, Priest)	2013-01-14	PA (41, Evil Tera)
2013-01-03	PL (34, FF Priest)	2013-01-15	AlB (38, Evil Iced Earth)
2013-01-05	AM (31, Evil Megadeth)	2013-01-15	AxL (23, FF Priest)
2013-01-06	SJ (35, Evil Megadeth)	2013-01-15	AsL (18, FF Priest)
2013-01-07	MK (24, Priest)	2013-01-15	CD (67, Marri Tjevin)
2013-01-08	BP (61, Marri Ngarr)	2013-01-17	DM (26, Evil Bullet)
2013-01-08	JsL (18, Evil White Lion)	2013-01-21	JD (40, Evil Kreator)
2013-01-08	PtP (18, Evil Kreator)	2013-01-21	KN (21, Priest)
2013-01-09	AdB (23, Evil Manowar)	2013-01-21	NP (35, Evil Tera)
2013-01-09	AnB (19, Evil Iced Earth)	2013-01-23	JmL (37, Anthrax Priest)
2013-01-10	KM (24, Evil Hatebreed)	2013-01-24	SbM (18, Evil White Lion)
2013-01-11	DP (27, Evil Kreator)	2013-01-24	WD (18, Evil Tera)

**Table 1.5.2 Picture-stimulated careful speech recordings. Shaded cells are additional sessions where rather than kigay speakers, I recorded older Marri speakers (§7.6.2).**

The careful speech data is generally of excellent audio quality, and has been completely transcribed (by me working alone) in IPA script, though the transcription is only close for features of interest (especially obstruents), and quite broad for vowels, which receive only limited attention in this analysis. This provides the main data for the investigations of English loanword phonology in Chapter 6 and peripheral obstruent realisation in Chapter 7.

### *1.5.3 Verb conjugations*

In some of the picture-stimulated sessions, when the speaker seemed quite confident in answering questions, I then went on to elicit some verb conjugation

paradigms. This was successful in 14 sessions, and the resulting data has been used for the analysis of verb suffixes (Chapter 10) as well as verb classifier tense/aspect/mood categories (Chapter 11). Further evidence of analogical change is evidenced in this data, however this is a large topic in itself and has been set aside for further research. Transcripts of the elicited verb paradigms are provided as Appendix 3.

#### *1.5.4 Natural speech data*

I began my fieldwork in Wadeye planning to conduct “semi-structured” sociolinguistic interviews (Tagliamonte, 2006), hoping that asking kigay about their day-to-day lives, their school experiences, and other sociolinguistic staples would gradually lead into casual, unselfconscious speech. However, I quickly found this method to be a complete failure. I have already outlined some of the difficulties in the relationships between myself, a whitefella, and kardu kigay – indeed, I believe that this gap in culture, power and common ground is even wider than those that other sociolinguists have faced, and often bridged. Besides this, my level of MP competence was far too low for any fluent speech to be directed at me, and though I had planned to avert this problem by working with pairs of kigay and encouraging them to discuss topics between themselves, this suggestion was uniformly ignored by the kigay, who perhaps could not fathom why I was asking them to tell each other about things they already knew. The other possible solution here was to recruit an MKK native speaker for conducting interviews, but though I did develop good working relationships with some kigay, I was not able to communicate abstract methodological concerns well enough to them to facilitate native-speaker interviewing.

The natural speech data I have recorded was achieved by other means: either occasions when kigay approached me with a story they wanted to tell, or conversation sessions (which also sometimes included substantial monologic narratives), which I recorded using a method borrowed from Blythe (2009). The essence of this method is to gather a small group of speakers (usually 3–4), to

create a comfortable seating environment focused around a campfire with a billy of tea, and to train a video camera and microphone on this setting. Speakers will generally be quiet and uncomfortable for the first few minutes of the session, and further periods of awkwardness may recur later, but after about 10 minutes most groups will begin to speak freely, and to some extent in a casual register. About a dozen sessions were recorded in this manner, in some cases in collaboration with Blythe. There are in total 24 natural speech recordings, generally of 30-60 minutes' duration, with 15 different kigay participating in various combinations. Transcription of natural speech recordings was very slow, and again required multiple passes working with kigay to associate the heavily lenited vernacular speech with "standard" forms. Transcription was performed using ELAN (Wittenberg, Brugman, Russel, Klassmann, & Sloetjes, 2006; Figure 1.5.2), and eventually resulted in partial transcription of most natural speech recordings, a few fairly completely transcribed, and a few of the more recent recordings yet to be transcribed at all. They are listed in Appendix 2.

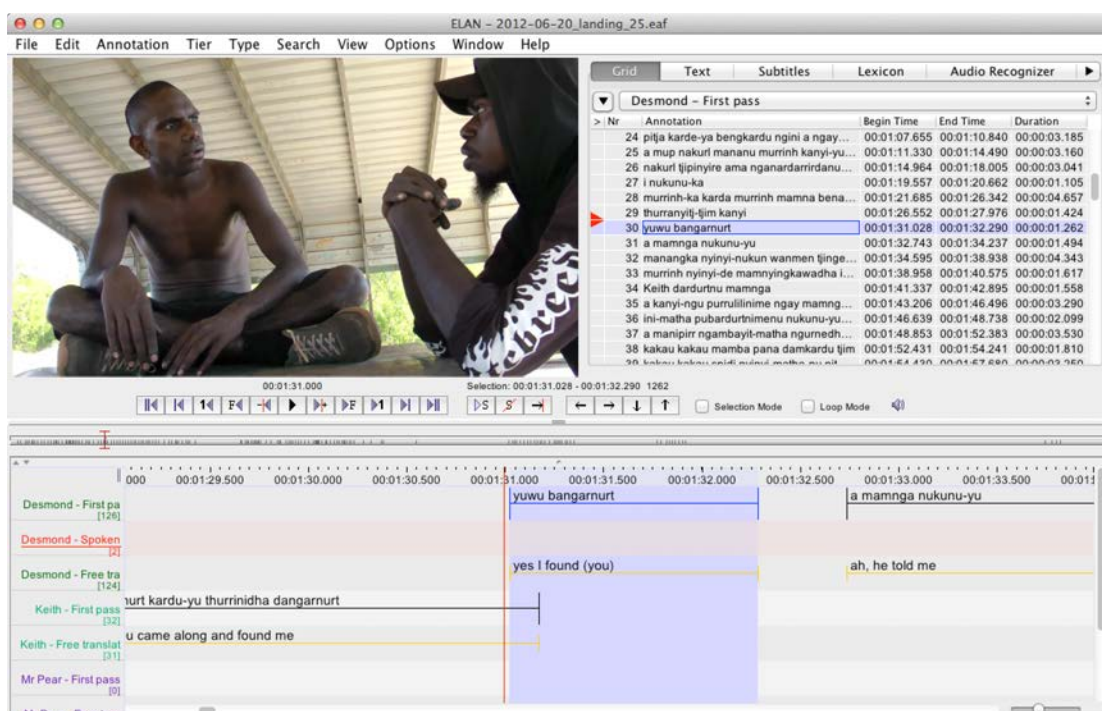


Figure 1.5.2 Screenshot of ELAN transcription software

### *1.5.5 Archival data*

In the chapter giving an overview of MP phonology I draw primarily on archival recordings by Walsh (1986), Butcher (1990) and Blythe (2004). This data is again used in Chapter 7 for drawing comparisons between SMP and MKK with regard to the realisation of peripheral obstruents. Of course, none of the archival materials drawn from Walsh, Butcher and Blythe were collected using my picture stimulus set, though I did take care to include in my stimulus set a number of words included in a wordlist deployed by Butcher, thus improving comparability with that data.

Each of the archival datasets has a different elicitation method: Walsh's recordings are from grammatical elicitation sessions, where the speaker carefully enunciates words to help Walsh understand grammatical forms. This speech seems broadly comparable to my own data – though some forms use unusual hyperarticulations to demonstrate paradigmatic contrasts, and these have been excluded from any prosodic analysis. Butcher's data is elicited by speakers reading from wordlists – a test that would not be repeatable with contemporary Kigay, whose level of literacy is much less than the earlier generation. There are some potential problems here in whether the act of orthographic interpretation may influence the output, though there are no obvious distortions in the data. For example, Street's orthography, used in the wordlist, has post-nasal obstruents written with voiceless letters ⟨t⟩, ⟨p⟩, ⟨k⟩ etc.; however all of the speakers recorded by Butcher produce voiced obstruents to some extent for these words. Blythe's recordings are from linguistic elicitation sessions, but they focus on more basic vocabulary and phrases, compared to Walsh's sessions, which focus on morphological alternations.

At a few points in the thesis I additionally drew on archival narrative or conversational recordings made by Street and Blythe. All archival recordings used are listed at the end of this thesis.

### 1.5.6 Examples in the text

Examples cited in the text are presented with codes indicating the identity of the speaker, and the corpus item from which they are drawn, or in some cases the external source from which they have been drawn. These can be referenced against the structured data listed above, or the natural speech recordings listed in Appendix 2. For example:

(CM, VSN_2-6)	Speaker CM, video-stimulated narrative session, video 2-6, see Table 1.5.1
(MJ, PSE)	Speaker MJ, picture-stimulated elicitation session, see Table 1.5.2
(ALB, VPE)	Speaker ALB, verb paradigm elicitation session, see Appendix 3.
(PtP, 2012-06-02)	Speaker PtP, natural speech recording of 2 June 2012, see Appendix 2.
(Walsh 1986, Tape 02)	Walsh's (1986) archival data, Tape 02.
(Notes, 2012-07-15)	Fieldnotes, 15 July 2012.

### 1.5.7 Archiving my data

Language data collected for this thesis is archived at the Pacific and Regional Archive for Digital Sources in Endangered Cultures (Paradisec).<sup>6</sup> Most of the data is available for further research upon request to Paradisec – though as mentioned above, a few corpus items are not accessible. These are recordings where the kigay have requested that the content only be viewed or listened to by me, usually due to extensive discussion of illegal activities.

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<sup>6</sup> <http://paradisec.org.au/>



## 1.6 The structure of this thesis

This thesis begins with ethnographic description, then moves into linguistic topics, first phonological then morphosyntactic. Chapters 2 and 3 are ethnographic, describing social organisation and social semiotics respectively. Chapter 4 provides a link between ethnography and linguistics, describing language at Wadeye as a social phenomenon, situating Murriny Kardu Kigay (MKK, the language of kigay) within this context, and giving an introductory overview of how MKK compares linguistically with MP as spoken by older people. Chapter 5 provides a background analysis of MP phonology, while Chapters 6 and 7 describe MKK phonological features in particular. Similarly, Chapter 8 provides a background overview of verbal morphosyntax, while Chapters 9, 10 and 11 describe morphosyntactic changes underway in MKK. Chapter 12 is both a Discussion and a Conclusion, summarising some of the main points made in the body of the thesis, and contextualizing these with respect to other research on northern Australian town languages. The thesis does not include a consolidated literature review, since the eclectic range of topics covered does not lend itself to such a thing. Instead, discussion of relevant literature is scattered throughout the thesis according to topics under discussion. Chapter 12 has the most concentrated discussion of comparable literature, though these tend to be “regionally comparable” rather than methodologically comparable studies. Table 1.6.1 shows how these chapters meet the research goals outlined in §1.1 above:

Research goals (§1.1)	Chapters
(1) Document the social structures of kigay’s day-to-day lives, including the subcultural “metal gang” dimension of their sociality;	§2. Kardu kigay and social organisation §3. Kigay subculture §4. The languages of Wadeye and the language of kardu kigay
(2) Document the language that kigay speak, focusing in particular in aspects of their speech that differ from what has been documented in previous descriptions of Murrinh Patha;	§4. The languages of Wadeye and the language of kardu kigay §5. Murrinh Patha phonology §8. The Murrinh Patha verb

<p>(3) Analyse which features of kigay speech might be socially salient linguistic markers, and which are more likely to reflect processes of grammatical change that run below the level of social or cognitive salience;</p>	<p>§6. English/Kriol lexical borrowing and phonological integration  §7. Lenition of /p/ and /k/  §9. The rise of coverbs  §10. Morphosyntactic change and variation in the polysynthetic verb  §11. Changing tense, aspect and modality</p>
<p>(4) Analyse how kigay speech compares to other youth Aboriginal language varieties documented in northern Australia, and argue that together these can be described as a phenomenon of <i>linguistic urbanisation</i>.</p>	<p>§12. Linguistic urbanisation in northern Australia</p>

**Table 1.6.1 Relationship of chapters in this thesis to research goals**

This thesis is intentionally eclectic, with every part related to other parts in some way, though they do not all revolve around a single core argument. I chose to present my material in this way because my fieldwork turned up a number of cultural and linguistic phenomena that remain largely undescribed in scholarly literature, and I preferred to give some coverage to several of these, rather than focus on just one topic at the expense of all others. I hope that some or all of these topics can be further investigated in future research; but in case that should not turn out to be possible, I consider it my main contribution here to have documented a series of interconnected phenomena in a field that is otherwise sparsely researched.

## Kardu kigay and social organisation<sup>7</sup>

### 2.1 Introduction

In this chapter I introduce the main protagonists of this thesis: *kardu kigay*, an emic age-grade of young men in Wadeye. I describe their role in household and family structures, as well as the traditional, kinship-based social categories in which they have membership. But kigay have in recent decades evolved their own new form of social organisation, the “metal mobs”. Like older forms, these are kinship based, though unlike older forms they do not involve exclusive “membership”, but rather multiple affiliations, and they are not determined by paternity. This chapter describes the metal mobs as a form of social organisation, while the next chapter describes the youth subculture that goes along with them.

The heavy metal mobs of Wadeye have received considerable coverage in the national press, especially with respect to violent conflict between the two largest mobs, Evil Warriors and Judas Priest. In newspaper articles they are inevitably referred to as “gangs”, which suggests something akin to the criminal groups of big cities (e.g. Thrasher, 1927), something very un-Aboriginal, or perhaps even a corruption of Aboriginality (e.g. Murdoch 2006). Alternatively, where a little more social analysis is attempted, the mobs are presented as “tribal” groups; proxies for the hereditary Aboriginal social groups of the area (e.g. Toohey 2004, 2006). But neither of these representations is strictly correct: the metal mobs are indeed Aboriginal kinship groups, but the relations by which they are constituted are predominantly collateral, in contrast to the descent relations of traditional

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<sup>7</sup> Parts of this chapter have appeared as Mansfield, John (2013) The Social Organisation of Wadeye’s Heavy Metal Mobs. *The Australian Journal of Anthropology* 24(2), pp. 148–165.

clan groups. In this chapter I will show that they are neither gangs, nor clan proxies.

Apart from my own 2013 publication, no detailed ethnographic analysis of the Wadeye metal mobs has previously been published, though they have been mentioned frequently in press reports, and have been the subject of a short video documentary. The most accurate and detailed description of the mobs is perhaps an article in the *Bulletin* (Toohey 2004), though this makes the common error of assuming that the mobs are all aligned to patrilineal clans. The documentary, *Heavy Metal Gangs of Wadeye* (Brooks and West 2009), takes a light-hearted approach that is not too much concerned with facts or analysis, but does contain some fascinating footage of the mobs dancing to their respective bands at a late-night party. Two unpublished academic theses include some material on the metal mobs, though neither is dedicated to an analysis of the phenomenon: Furlan (2005) provides useful background on the emergence of youth culture at Wadeye in the 1970s and 80s; Ivory (2009) describes conflict and violence among the mobs, and their (strained) relationship with town authorities. However neither includes an analysis of how the metal mobs operate in day-to-day social interaction, social identity and social organisation.

## **2.2 *Kardu kigay***

This thesis is structured around a demographic group, *kardu kigay*, which can be translated as “young Aboriginal men”. The word *kigay* can also be used alone, and in itself carries the lexical meaning, but in MP often appears together with the noun classifier *kardu*, which encompasses all socially recognized persons, and contrasts with the *ku* classifier used for whitefellas (§3.9). Children at Wadeye are referred to using the unisex term *mamay*, from which category they secede in early teenage years, roughly at the onset of puberty, becoming *mardinypuy* “girls” and *kigay* “boys”. The point at which a male is too old to be a *kigay* is somewhat indeterminate, somewhere in his 30s or 40s. Both Stanner (1958) and Ivory (2009, p. 100) report that *kigay* proceed into a “middle-aged”

stage *keke*, but I have only rarely heard this term used (and there are no instances in the corpus). Much more common is the term *ngalantharr*, roughly “old man”, which is associated with greying hair, and carries some connotation of respectability.

Kigay are seen as spontaneous, independent and irresponsible. This is a view perpetuated by older people at Wadeye, as well as the kigay themselves, and it is to some extent true – we will see in the following sections that kigay often do tend to “look after themselves”, or themselves and their kigay peers, which therefore makes them quite irresponsible towards their elders, their juniors and to their romantic partners. The importance of personal autonomy has been widely reported in other Aboriginal societies (e.g. Austin-Broos, 2009; Eickelkamp, 2011; Martin, 1993), and kigay can be seen as an extreme example of this. But their assumption of autonomy balances awkwardly with their demands to be looked after by older kin. Kigay of course have their own ethical standards, but these are heavily tilted to responsibility for their peer group, as will be described in Chapter 3.

### **2.3. Economics and households**

Most kigay receive government welfare payments or Community Development Employment payments. This provides a fortnightly income of \$270 cash and a further \$270 that can only be spent using the “Basics card” to purchase food and other groceries from the town shop and takeaway (Toohey, 2008). The cash element seems to be spent and distributed almost straight away on items from the Wadeye shop, demands for cash from kin, and on marijuana, which is also shared among kin. This may sound like a lot to spend straight away, but it must be appreciated that basic goods are very expensive at Wadeye, and marijuana is extremely expensive (\$3.4). Once a year a larger payment is received for child support, which facilitates the purchase of larger items like cars and whitegoods (Notes, 2013-06).

Kigay are not the heads of households, but rather live with parents or other older kin, and in many cases have quite fluid living arrangements, sleeping and eating in a range of houses. Evidence for this is found in conversational recordings:

DP: Nanku-ka ngarra narnamkapup, ngamimarda?

*You two brothers, where are you going to sleep, on the other side (at Manthatjpe)?*

PP: Aa ngamimarda ... ba Shuni nganiwitnu ne?

*Maybe on the other side ... or maybe I'll sleep at Shaunie's, eh?*

(DP/PP, 2011-09-01b)

If welfare payments are quickly exhausted by those kin who make the most insistent demands, and especially on providing marijuana for kigay, this leaves little for household expenses. One kigay by his own estimate reports that he sometimes gives his mother \$30–40 from payment to help with the purchase of food, electricity etc., but sometimes gives nothing, for which he berates himself as *pelpitj wiye* “stupid, thoughtless” (Notes, 2011-08).

In general the balance of monetary demands, locally known in English as “humberging” or in MP as *ampak*, seems unevenly balanced towards kigay as demanders rather than providers. Older people complain to me that they have to hide their money and possessions to keep them away from kigay (Notes, 2013-01). At a town meeting debating the “Basics Card” welfare scheme, which was designed to help women especially resist demands for cash, various men spoke against the scheme as an imposition on their independence. But an elderly woman got up to speak in favour of it, complaining that her kigay kin threaten her if she does not meet their demands (Notes, 2011-07).

## 2.4 “Wives” and children

Most kigay beyond the age of about 18–20 are fathers, and in many cases have permanent relationships with the mothers of their children. In MP such a relationship is labelled *palngun ngay*, literally “my woman”, and it might almost be translated as “my wife”, except that kigay generally do not marry in any formal sense. The traditional marriage system of the region is extensively documented by the Falkenbergs (1981, but based on 1950 fieldwork), and was an overtly economic arrangement between the suitor and the bride’s parents. The gifts and services required as a bride-price were such that it was older men commanding resources and political power who took most of the brides, in some cases many brides accruing to one man (pp. 61–67). One of the first acts of the missionaries was to prohibit arranged marriages (A. Falkenberg & J. Falkenberg, 1981, p. 65; Pye, 1972), but rather than ending the practice altogether, the result seems to have been that it has become invisible to whitefellas. There are still arranged marriages, but these are not talked about openly, and are not sanctioned by the Church or the Australian government. I do not know how many arranged marriages take place now, though none that I have heard of involve kigay as the husband. Neither is the topic spoken of openly enough to give a clear idea of local opinions on the matter, though some people have mentioned it to me disapprovingly (Notes, 2013-06). The missionaries’ plan was to replace arranged marriages with monogamous, Church-sanctioned “love marriages” between young adults of similar age, and the Marriage Register still maintained at the Presbytery shows that this practice was widespread during the Mission. However Christian marriages tail off sharply after the end of the Mission in 1975, and are now quite rare.

One consequence of kigay forming relationships outside of any institutionalized marriage system is the loosening of adherence to the kin-based rules of partner selection. Ideally a wife should be of the *purrima* category (MoMoBrDaDa) (Blythe, forthcoming; A. Falkenberg & J. Falkenberg, 1981, p. 34), with some structurally similar categories also allowable. But the Falkenbergs also report that alongside the sanctioned marriage relationships, there have always been

“clandestine” sexual relations between partners with all manner of less acceptable kin relationships (p. 81). The sexual relationships engaged by contemporary kigay may be seen as a continuation of this clandestine tradition, with spontaneous attraction perhaps only partly constrained by classificatory kinship taboos. Kigay have told me of sexual relations they have with women in unsanctioned kin relationships (Notes, 2011-09). But– to be clear – these involve breaking *classificatory* kin taboos, not actual incest. The “any way” coupling of kigay and *mardinypuy* “young women” is another topic that features in older peoples’ complaints about the younger generation (SL, 2011-09-21).

In summary, most kigay are sexually active and are the genitors of children, but have limited social recognition as husbands, and perhaps only a minor role as fathers. If a kigay forms a relationship with a woman and children are born, he has neither the financial resources nor the housing available that would enable him to establish a new household. In many cases the relationship between a kigay and his children’s mother breaks down (often accompanied by incidents of violence against the mother<sup>8</sup>), and the kigay may have very little role as a carer for the children. But there are also kigay who do frequently visit their *palngun* and children, and in some cases kigay live primarily with their *palngun*, joining their households. However I do not know of any cases where a kigay’s *palngun* and children join his household. In general women have more stable living arrangements, and men are more mobile.

Since kigay do not set up their own households (even after having children), and have quite loose attachments to the multiple households in which they eat and sleep, we might say that their primary social attachments are not to the household, but to their peers. Kigay are not closely controlled by older relatives, neither do they act as the main carers for younger relatives. Most of their time is spent “hanging out” with other kigay, forming the basis for a subversive youth culture as discussed in §3.2.

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<sup>8</sup> When I explained to one of my kigay friends that my own relationship had broken down, his first question was whether I had a restraining order (Notes, 2012-07).



## 2.5 Aboriginal social organisation

The analysis of social organisation was central to Australianist ethnography in the first half of the twentieth century. One of the central concerns in the major works of Stanner, Elkin, Hiatt, the Berndts and, above all, Radcliffe-Brown, was the description of how Aborigines related to one another as social groups. And it is these core questions of social organisation that provide the framework for this chapter: What social groups do people form, and how does one become a member of such a group, or cease to be a member? What are the relations between people in the same group, and between people in different groups, or between groups as wholes? How are groups constituted, in the day-to-day activities of domestic and public life, as well as in special events such as ritual and conflict?

The main principles of Aboriginal social categories were succinctly stated in Radcliffe-Brown's essay, "The Social Organization of Australian Tribes" (1930), in which he described how clans, moieties, sections and subsections are constituted. Hiatt (1962) would later argue that Radcliffe-Brown had been a little *too* succinct in his eagerness to propose universal patterns where, in fact, Aboriginal societies display far more variation (and, in particular, a more complicated range of relationships between patrilineal *clans* and residential *hordes*). Stanner (1965) responded in defence of the earlier work, arguing that Radcliffe-Brown's analysis had only been proposed as a set of generalisations rather than universal truths.

Half a century later, it is perhaps Hiatt's approach that has become dominant. Since the 1990s, social organisation has been approached rather obliquely in Australianist ethnography – principles of group formation are discussed most

often with respect to how such principles are undermined or subverted.<sup>9</sup> The seeds of this approach had earlier been sown in the international sphere by a massive anthropological turn towards self-reflection and criticism of the positivist intellectual tools that had previously prevailed in the discipline (e.g. Clifford & Marcus, 1986; Keesing, 1994; Vayda, 1994). In Australianist ethnography the revolution was most completely embraced by two major journals dedicating special issues to “intercultural theory” (Hinkson and Smith 2005; Sullivan 2006) – broadly, a critique of structuralist social anthropology, with its portrayal of separate cultures each distinguished by its own social system.

Traditional social organisation analysis always aimed, by formulating the principles of social groups, at laying foundations for what characterises “a culture” (the Warlpiri, the Arrernte, the Murrinh Patha), and what makes each distinct from others. It is these aims that are rejected by intercultural theory, the main tenets of which are that (a) humans do not live within the space of a single, defined culture, but rather in an *intercultural* social field, in which every social interaction negotiates an unstable and relational position between diverse cultural resources (Hinkson and Smith 2005; Merlan 2005); (b) there is such a thing as culture, but there are not stable and distinct *cultures* (Sullivan 2005, 2006). Accordingly, interculturalist work on social organisation focuses on the instability and negotiability of group identities, and how they emerge only through the relational play of cultural difference. In particular, for Aboriginal Australian society, it is argued that social life is constituted through the interplay of Aboriginal and whitefella cultural forms: Merlan (1998: 52, 86–94) describes how in the town milieu of Katherine, where much of the social space and infrastructure is controlled by whitefellas, traditional clan identities are replaced by broader language-group identities that show considerable flexibility and openness to contextual reinterpretation. Both Sullivan (2005) and Glaskin

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<sup>9</sup> The situation is quite different in the historical reconstruction of social organization patterns, where the existence of definite social groups is taken as a given (e.g. McConvell, Keen, & Hendery, 2013).

(2002) describe how group identities in the Kimberley region are constituted, and indeed reified, by engagement with whitefella law in the form of the Native Title Tribunal. Batty (2005) shows how Aboriginal corporate governance is produced through interaction with whitefella bureaucracy. Ottoson (2012) reflects on how the enjoyment of country music, and conceptions of geographic “country”, are influenced by a history of Aboriginal engagement with the cattle industry.

Given that the metal mobs of Wadeye name themselves after global heavy metal bands who are, without exception, whitefellas, it might seem natural to analyse this phenomenon as a product of intercultural identity. However, this will not be my approach. The emergence of the metal mobs clearly does involve some imaginative identification with wild, rebellious whitefellas (§3.8). But the engagement with non-Aboriginal culture is very much on the imaginative level here, rather than through concrete social engagement. A common ingredient in all the intercultural studies mentioned above is a substantial history of direct engagement with whitefella social forms – and I note also that it is usually older, more socially mobile Aboriginal people who are the subject of these studies. Any such engagement is absent or at best marginal among kigay (§3.7, §4.4.2).

I will argue that the metal mobs are a distinct and highly localised cultural form, bearing only an indirect relationship to whitefella culture, mostly on the level of the appropriation of mass-media images. They have some similarities to gangs found in cosmopolitan cities, but I will argue that they are different enough that they should not be understood as an instance of the urban gang phenomenon (§3.2.2). Furthermore, while the current trend in the analysis of social organisation is to highlight its fluidity and instability, by contrast I will describe how the metal mobs show substantial stability and quite regular patterns in their codification of social interaction among Wadeye youth. I do not propose to reimpose structuralist distortions that portray social organisation as unrealistically rigid and deny any role for individual flexibility and choice. But neither do I accept that social interaction is pure indeterminacy and flux – I cannot, for example, concur with Sullivan when he characterises culture as “a

series of sites of contested representation and resistance” (2005, p. 184), nor Hinkson and Smith when they describe it as “the interplay of differing expectations, understandings and forms of practice” (2005, p. 161). In such formulations there is little room left for social encounters in which participants have *basically the same* “expectations, understandings and forms of practice” – i.e., all those interactions that are constitutive of relatively stable social patterns. In analysing the metal mobs as a form of social organisation, I aim to describe such patterns, while also acknowledging flexibility and ambiguity.

Before going on to describe the metal mobs as an innovation in social organisation, I will first more briefly outline the traditional social categories of the area.

## **2.6 Traditional social categories of the Wadeye region**

The Wadeye region has multiple interlocking and overlapping forms of social organisation, most of which remain current today, but with reduced weight in governing social interaction. All traditional social organization is based on kin relationships, so I begin with some brief comments on kinship.

Like all Australian Aboriginal societies, people of the Wadeye region structure their social interactions around kinship. One’s father and his brothers are of the same category, and one’s mother and her sisters are of the same category, which means that one has many “fathers” and “mothers”, and all their children are one’s “sisters” and “brothers”. On the other hand, unlike European kinship systems, patrilineal and matrilineal grandparents are distinguished, so that one has four categories of kin in this generation, which in turn provides the basis for a more finely specified range of uncles, aunts and cousins. Further details of how kin categories are structured are quite complicated, and for these the reader is referred to Blythe (forthcoming).

Kigay identify their kin using essentially the same traditional structure of kin categories, though they use borrowed labels for many of these categories. These are a mixture of borrowings from English and from other Aboriginal languages. In most cases the term earlier recorded as the “proper” MP word is still used alongside the new borrowing, though the older *yile* and *kale* have been almost completely superceded by the English borrowings *dedi* and *mama*. A list of attested borrowings is provided in Table 2.6.1.

MP kinterm	Relationship	Innovative kigay term and presumed source
<i>ngathan</i>	Br <sup>10</sup>	<i>paba</i> < Gurindji <i>papa</i>
<i>yile</i>	Fa	<i>dedi</i> < Eng <i>daddy</i> <i>warrj</i> <sup>11</sup> < Gurindji
<i>kale</i>	Mo	<i>mama</i> < Eng <i>mama</i>
<i>pugarli</i>	FaSisCh, MoBrCh	<i>kaski</i> ~ <i>kas</i> < Eng <i>cousin</i>
<i>kaka</i>	WiFa	<i>lamparra</i> < Gurindji, Mudburra, Walmajarri
<i>nangkun</i>	WiBr	<i>bandji</i> < Kriol
<i>thamuny</i>	MoFa	<i>tjabutj</i> < Ngan’gi
<i>mangka</i>	FaMo	<i>maka</i> < Marri langs
<i>yile</i> , <i>nginarr</i> , <i>wakal</i> , <i>muluk</i>	MoFaBroSoDaSo ?MoFaSisSo	<i>ngarluk</i> (< Jaminjung <i>ngaguluk</i> )
<b><i>Kin relations for which only traditional terms are attested</i></b>		
<i>mumak</i> ~ <i>munak</i>	Sis	
<i>wakal</i>	So, Da	
<i>kangkurl</i>	FaFa	
<i>kawu</i>	MoMo	
<i>pipi</i>	FaSis	
<i>kaka</i> <sup>12</sup>	MoBr	

<sup>10</sup> Kinship abbreviations: Br “brother”, Fa “father”, Mo “mother”, Sis “sister”, Ch “child”, Wi “wife”, So “son”, Da “daughter”.

<sup>11</sup> Seems to be used only for distantly related classificatory father, and not biological father or his brothers.

<i>purrima</i>	MoMoBrDaDa	
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**Table 2.6.1 Innovative and traditional kin terms used by kardu kigay**

For two borrowed terms in the Table, *ngarluk* and *warri*, I have only limited information about the kin relationships that license these terms – they both seem to be used for somewhat distant kin relations, making them more difficult to triangulate. It therefore remains to be seen whether these fit with the traditional MP kinship structure or not. The innovative term *lamparra* (WiFa) provides a more specific category than the traditional MP *kaka*, which covers both WiFa and MoBr.

Kigay have also innovated an address term *spidi*, which does not directly reference a specific kin relationship, but rather is a marker of peer familiarity, and is used especially between kigay who share a *ku spidi* affiliation in the metal mob social system (§2.7).

### 2.6.1 Clan, language and ceremony groups

The patrilineal clan is the fundamental traditional social category, both in the sense that others can be derived from it, and in terms of functional importance. Clans own tracts of country and are associated with totemic species that are found in that country (see also §3.9). For example, the Kura Tjipmam clan come from a stretch of country Ngudaniman, Yerrpilam (“Fossil Head”) and Kultjil. Their name references dark silty water that enters the sea at Yerrpilam, and they are alternatively known as Kultjil clan. Their totems include *ku balli* “mud crabs” and *ku kanamkek* “Rainbow Serpent”. It is not unusual for neighbouring clans to share one or more totems.

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<sup>12</sup> The MP term *kaka* traditionally covers both MoBr and WiFa. In the former sense *kaka* is still used, but in the latter sense the borrowing *lamparra* is used.

During the Mission 15 clans were identified as populating the settlement (J. Falkenberg, 1962; Stanner, 1936). Curiously, though clans are treated by Wadeye Aboriginal people as things of great permanence, the passing of decades has seen various bifurcations in local accounting of clans. Together with the recognition of slightly more distant groups as having a legitimate place in Wadeye, up to 27 clans are now enumerated, depending on sources (Barwick et al., 2009; Ward, 1983).

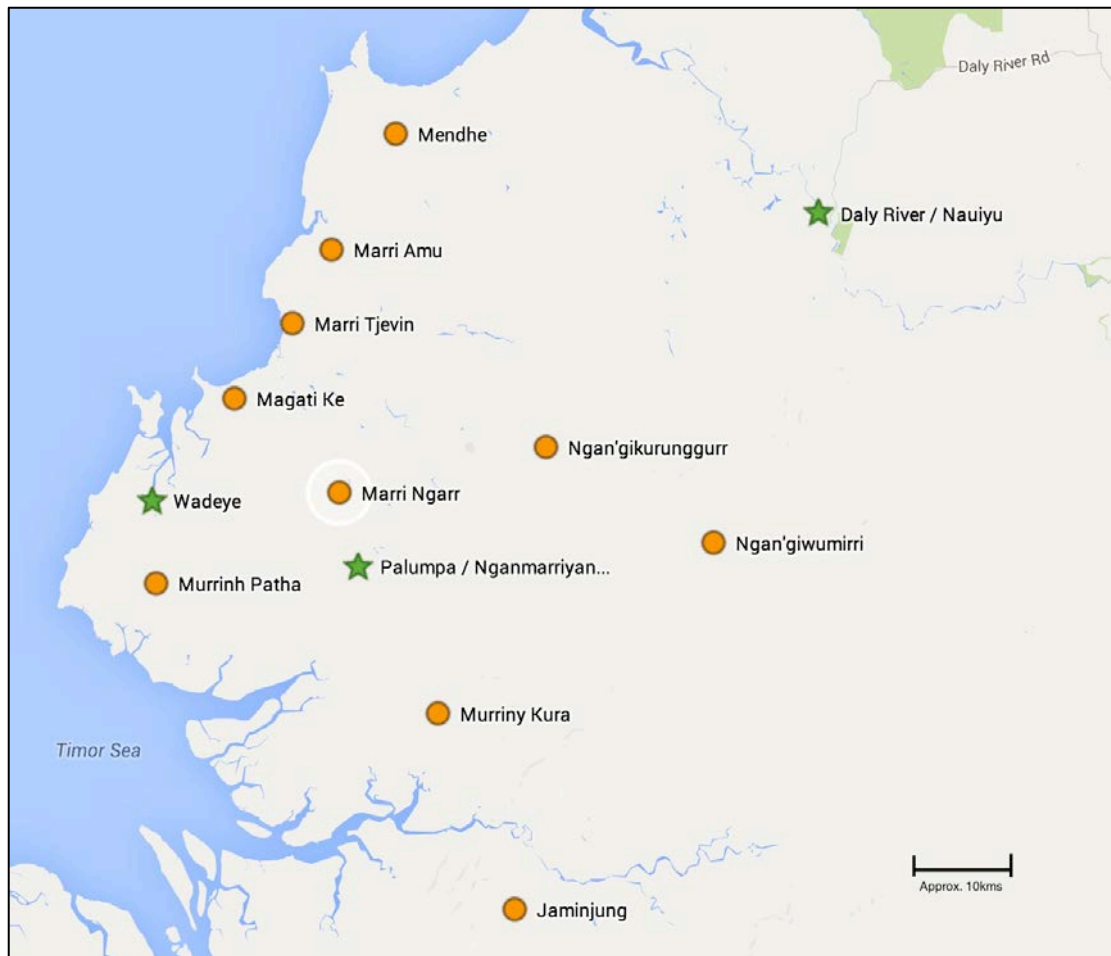


**Figure 2.6.1 Bush estates of clans populating Wadeye (Barwick et al., 2009; Blythe, 2009; Furlan, 2005; Ward, 1983). Locations are approximate only and do not constitute a claim about actual ownership. Green markers show Wadeye and the two closest towns, Palumpa and Daly River, both of which were also founded as missions.**

Clans can be grouped into tribes or “language groups” according to self-identification as speaking the same language. For example, Kuy and Yederr clans both say their language is Magati Ke and agree that they speak the same language, although furthermore, and without contradiction, these clans may

identify their languages more specifically as Magati Kuy and Magati Yederr. (For most of the language names treated here, the first part means “language”: *murriny, marri, magati, ngan’gi*.) The categorization of clans into language groups is not always straightforward, as some clans identify with two or three neighbouring languages either simultaneously, or at different points in time. For example the Papa Ngala clan is recorded as Murriny Kura by Ward (1983), but later in Barwick et al (2009) identified as Ngan’giwumirri; the Pulampa clan is identified by Ward as both Marri Ngarr and Ngan’giwumirri, but by Barwick as Marri Ngarr and Murriny Kura. More distant, perhaps more politically peripheral clans seem to have these more labile language associations, whereas the more strongly represented clans from the area close to Wadeye all associate clearly with just one language. For example the Dimirnin, Nangu and Maniny clans all unambiguously identify as Murrinh Patha people; Wakal Bengkuny and Kungarlbarl clans are equally clear about being Marri Ngarr people. Adding to the difficulty of a stable taxonomy, most clans can be referred to by more than one name, and some of the languages also have multiple designations (cf. Sutton, 1991).





**Figure 2.6.2 Approximate indicators of language/land associations in the Wadeye region (Barwick et al., 2009; Blythe, 2009; Furlan, 2005; Reid, 1990; Ward, 1983)**

The language groups that have been most consistently identified for Wadeye people are Murrinh Patha, Murriny Kura, Marri Ngarr, Magati Ke, Marri Tjevin and Marri Amu. To this core list Jaminjung and Mendhe can also be added, though their traditional lands are further away, and speaker numbers are smaller. In the most recent community surveys Ngan'giwumirri and Ngan'gikurrunggurr are also usually added. Various pairs within this list are closely related dialects – a fact which is readily admitted by speakers themselves. The language groups are listed in Table 2.6.2, showing those which can be paired as dialects, as well as numbers of clans that identify primarily (or most recently) with each language. The use of various Aboriginal languages at Wadeye is discussed in §4.3.

	<b>Languages</b>	<b># Clans</b> (Barwick et al., 2009; Ward, 1983)
Core original settlement groups	Murrinh Patha	5
	Murriny Kura	2
	Marri Ngarr	7
	Magati Ke	2
	Marri Tjevin	2
	Marri Amu	2
More peripheral groups	Jaminjung	2
	Mendhe	1
	Ngani'giwumirri	2
	Ngan'gikurrunggurr	2

**Table 2.6.2 Language groups in Wadeye**

Another superordinate grouping for clans is into “ceremony groups”, which are activated for initiation rites (§2.6.2), as well as funerary smoking ceremonies and any other events involving traditional dance. The importance of these groups in ceremonial exchange and in transactions with the spirit realm has been extensively documented by Marett (2005) and Barwick (2006, 2011). The situation with ceremony groups is much as with language groups, with some clans identifying with more than one ceremony group, or changing group over time. The groups Djanba, Wangga and Lirrga are the most solidly attested, though in recent times some clans also identify as Balga or Wurltjirri, both of which may or may not be seen as distinct from Djanba. All of these group names can also be regarded as the names of music/dance genres.

Contemporary kigay are clearly aware of their clan, language and ceremony group affiliations, but these are to some extent associated with a “bush life” which is gradually receding. In §3.9 I argue that it is heavy metal mobs that are the more important social categories for kigay in the contemporary town setting.

Moiety and subsection groups have also been used at Wadeye, but these categories have both fallen into disuse. *Karttjin* “chicken hawk” and *tiwungku*

“eagle hawk” were the patrilineal moieties, seemingly well-established in the social structure (Stanner 1936), so that it is not obvious why they have ceased to be recognised. Subsections, on the other hand, were an innovation only briefly borrowed in the early twentieth century from the Jaminjung and other groups to the south, being discarded after just a few decades’ currency (Blythe, forthcoming). Around the same time, some Wadeye men experimented with the penile subincision ceremony they had encountered among people to the south. This too proved a rather brief fad (Mark Crocombe, *p.c.*).

### 2.6.2 Initiation ceremonies

The progression of males from boyhood to adulthood was marked by initiation ceremonies in traditional culture. These institutionalized recognitions of maturation fell into desuetude in the 1980s and 90s, but have in recent years returned to regular practice.

Stanner (1966) reports three stages of initiation for males: one pre-pubescent (*da djaban*), one around the onset of puberty (*da tjembitj*), and one for young adults (*da puny*). I have never heard kigay discuss the *djaban* initiation<sup>13</sup>, but *tjembitj* and *puny* are often mentioned, and are a source of great pride for their initiates. *Tjembitj* is a circumcision ceremony and roughly coincides with the beginning of *kigay* status. The initiate is sponsored by a ceremony group other than his own patrilineal group, and thereafter he takes the name of his sponsoring group (Djanba, Wangga or Lirrga) as a sort of alias that is used within his own immediate family. In my observation this alias is used particularly by his sisters, with whom his relationship now becomes quite heavily tabooed, creating the need for a circumspect name. Where lapses in *da tjembitj* have meant a kigay is circumcised non-ceremonially at the health clinic, he takes instead the name *dakta* (< doctor).

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<sup>13</sup> In fact I suspected that the term, if not the ceremony, had fallen into disuse, but Ivory (2009: 111) reports that *djaban* is still observed.

*Puny* is a weightier ceremony involving the transmission of restricted adult knowledge. Stanner (1966) describes the 1930s ceremony as he witnessed it in some detail, and Ivory (2009: 108–122) describes a ceremony held in 2005. Kigay look on *puny* as a “spiritual” experience – that is to say, they attribute to it some numinous power or importance. One kigay, reaching for an explanation, told me that “afterwards you feel different” (Notes, 2011-07). I have not noticed any signs of greater respect or responsibility being bestowed on *puny* initiates, but further research on this topic may show the ceremony to have some social effects that are not obvious to outsiders. There are some kigay who are old enough that they should have been initiated, but have missed out, for instance due to time spent in prison (Notes, 2011-10-13).

## **2.7 Metal mobs as kin-based social categories**

The metal mobs constitute a system of social classification based on kinship, applying to essentially the same segment of the Wadeye population referred to as *kardu kigay*: males from the onset of puberty to about 40 years old (§2.2). Almost all kigay I know declare an affiliation to one or more metal mobs, referred to as one’s *ku spidi* (from the sub-genre “speed metal”, for the meaning of *ku* see §3.9). As mentioned above, *spidi* is also used as a familiar term of address, especially between kigay who share a *ku spidi* affiliation (§2.6).

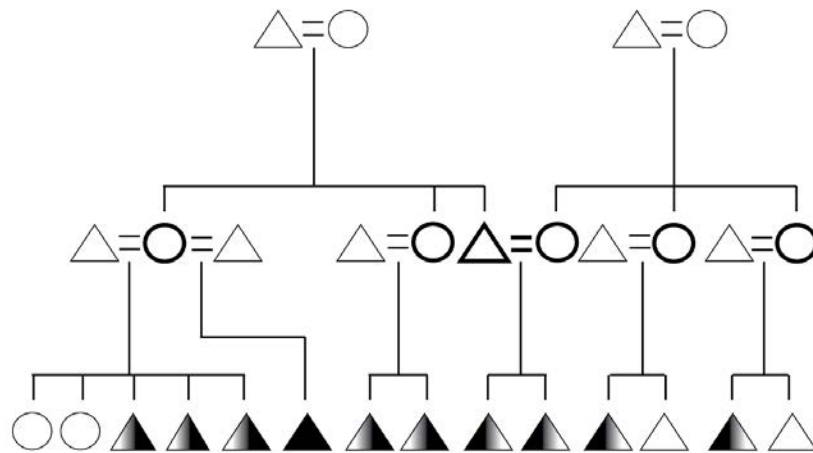
A very few kigay claim that they are not involved with any mob, but even in these cases, third parties readily identify their mob affiliation. Such kigay are presumably attempting to distance themselves from the violence with which the mobs are associated (§3.3), perhaps assuming that this is the object of my interest, but they are nonetheless socially recognised as having certain mob affiliations. Some men in their forties and fifties have long-standing mob affiliations that are still referenced in social interaction, and I even know of one *ngalantharr* “old man” in his sixties who, at least in private conversation, identifies somewhat obliquely as a Slayer affiliate (Notes, 2013-06).

Young women also have metal mobs, most of which are named as explicit female counterparts of mobs to which their classificatory brothers are affiliated – for example, the Maiden Girls are sisters of the Iron Maiden mob. Others have independent names such as the Kylie Girls (after chanteuse Kylie Minogue). However, the gendered restriction on my ethnographic research (§1.4) prevents me from giving a reliable account of the female mobs.

Shared mob affiliation is generally between kigay who are classificatory brothers or cousins. To a lesser extent, descent relationships (uncle-nephew, father-son) may obtain between mob affiliates; but it is collateral relationships that dominate, and these may be on either the mother's or father's side, with no obvious restriction on degree of separation. In practice, though, co-affiliates seem to be immediate biological brothers, first degree parallel cousins (classificatory *ngathan*, "brothers") or first degree cross-cousins (classificatory *pugarli*, "cousins"). In the mob affiliation data I collected for almost 100 individuals affiliating to 15 different mobs (§1.4), matrilateral links are somewhat more prevalent than patrilateral links. Though there is considerable flexibility in what kin relationship may obtain, it seems strictly necessary that some kin relationship must be recognised between co-affiliates – which is hardly surprising, since social interaction between Aboriginal people at Wadeye is still, in keeping with tradition, largely determined by kin relationships.

Figure 2.7.1 shows an example of a fairly small metal mob, Kreator, which is named after a German thrash metal band that found international success in the late 1980s. I believe this is a complete or almost-complete representation of current Kreator affiliates, with the mob essentially made up of two sets of classificatory brothers (in both cases classified as such because their mothers are sisters), with the two sets of brothers related as cross-cousins. Their clan membership is diverse, embracing Nganthawudi (Mendhe language), Kirnmu (Murrinh Patha), Nadirri (Marri Tjevin) and Yederr (Magati Ke) clans. Kreator affiliates are half-shaded triangles, and an older kigay who is credited with starting the mob is the black triangle. Bold lines highlight the mothers by whom

the affiliates are related as brothers, and the marriage relationship that connects the two sets of brothers.



**Figure 2.7.1 Kreator mob kinship**

The metal mobs are essentially kin sets that take up a name and an external symbol as a way of expressing their relatedness. In this they show strong continuity with the use of totemic species in traditional Wadeye social categories. But there are also fundamental differences between the metal mobs and traditional groupings, not least of which is the formation by collateral rather than lineal relations. Other differences might be considered to follow from this essential fact: mob affiliation is non-exclusive; there is a substantial element of individual choice or discretion in affiliation; the mobs do not own land, and do not hold sacred/secret knowledge; but they do have symbols, stories, and shared beliefs. All of these differences will be discussed in this chapter and the next.

There was already an emergent urban youth culture at Wadeye before the metal mobs came into being (Furlan, 2005: 221), but after ABC's music video program *Rage* started broadcasting in 1987, named youth mobs proliferated, and began to name themselves fairly consistently after heavy metal bands (§3.5). A coherent history of the mobs would need to explain how the earlier mobs emerged after the end of Mission governance in 1975, and how the mobs expanded and came to include two very large groupings, the Evil Warriors and Judas Priest, that in the

years after 2000 caused major disruptions in Wadeye by their chronically violent conflict (Ivory, 2009; Toohey, 2008). I hope that such a history may be written, but to do it justice would be beyond the scope of this thesis. However there is some further description of conflict between language groups and the Evil/Priest division in §4.3.2, and the role of heavy metal in kigay subculture is further discussed in §3.5.

For the purposes of this chapter it suffices to note that the Wadeye metal mobs have been in existence for at least twenty years, and there are now about thirty named mobs active in the town. Most are named directly after a heavy metal band (Judas Priest, Fear Factory, Megadeth), though some are usually known by an abbreviated or modified name (Lica from Metallica, Tera from Pantera, Big-T from Testament), and there are also a few mobs that take their names from other sources. For example, the German mob – perhaps the oldest in continuous existence – is named after the Nazi villains who appeared in war films shown at Wadeye film nights in the 1960s and 70s; Bad Boys are named after a 1995 film starring Will Smith; the Evil Warriors name has a more complex and ambivalent history, but the first part of the name probably derives from *ku karratj* (“the devil”) being a clan totem of some founding members, and the latter part of the name references *The Warriors* (1979), a dystopian film about urban gangs in New York City.

## **2.8 Flexibility in mob affiliation**

As described above, mob affiliation has a very strong kinship basis, especially between classificatory brothers, but it should also be stressed that affiliation is not deterministic. Brothers usually share a mob affiliation, but there are also cases where even direct biological brothers do not share the same affiliation. Ultimately, it seems that shared mob affiliation is a product of “close” relationships in the sense of shared experiences, residency, and time spent together – though I would still argue that the metal mobs are kin sets, because it is in practice impossible in Wadeye to separate close relationships from kinship.

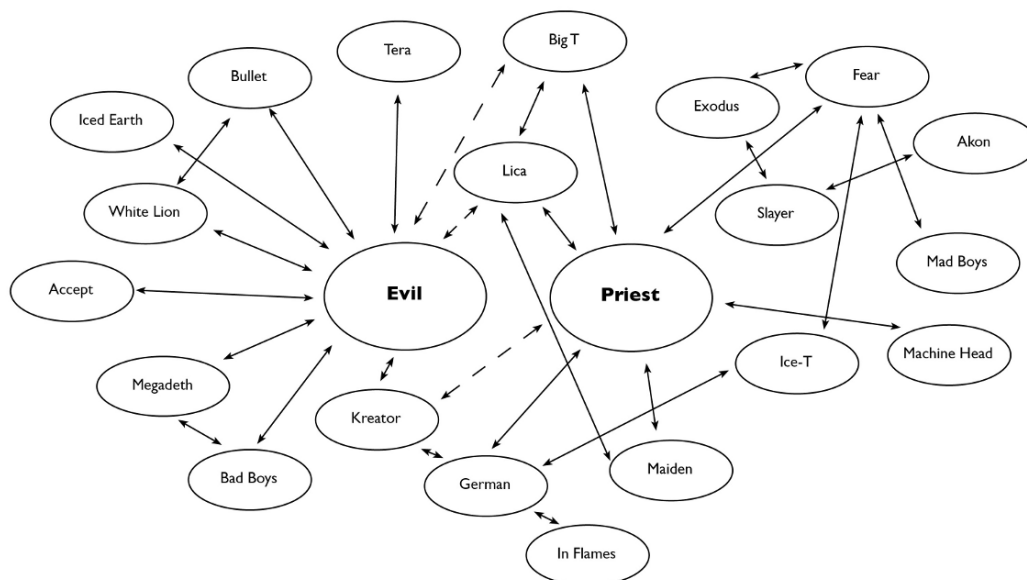
It would be a mistake to propose mob flexibility as a complete rupture from traditional forms of social organisation, as there is evidence elsewhere for flexibility in how kin relations are determined, with social and geographical closeness taken into account along with genealogy (Dousset 2002). Membership of country-owning groups has also been flexible, at least in some cases (Myers 1986), as we have seen that traditional categories in Wadeye are somewhat labile. But even though flexibility is not a new phenomenon, the degree of individual choice manifest in Wadeye metal mobs is greater than that of the traditional social categories. Certainly the contrast in Wadeye is quite clear: when it comes to clan identity, I have not encountered any kigay who does not identify his clan as being the same as his father's clan, but it is not difficult to find instances of brothers who do not share the same mob affiliation, or who share only one part of their respective compound affiliations (see below).

The non-deterministic nature of metal mob membership is a feature shared with another new form of Aboriginal social organisation: the cognatic descent groups that have been documented in various urban and rural settings. These are groups to which one can belong either by patrilineal or matrilineal descent – in short, by identifying any ancestor who is a member of the group (Sutton 1998: 64). These cognatic kinship structures and households tend to be matrifocal, with the authoritative role of senior males much diminished, and they variously refer to themselves as “clans”, “mobs” or “families” (Eckermann 1977; Koepping 1977; Birdsall 1988). But the metal mobs are also very different to cognatic descent groups, firstly because they are not constituted by descent but by collateral association. Furthermore, while cognatic descent groups have emerged *in place of* patrilineal clans in “settled” areas where these older structures were radically disrupted by whitefella incursions, the metal mobs have emerged where patrilineal clans remain active.



### 2.8.1. Multiple affiliation

The use of collateral links in constituting mobs, and the non-deterministic nature of affiliation, together make it almost inevitable that mob affiliation is non-exclusive. Every kigay has many classificatory brothers and cousins, and there is nothing to prevent him being socially close to, say, one group on his mother's side, and another on his father's side. In fact, most kigay are affiliated to more than one mob in this way, and it is especially common for a kigay to affiliate primarily with some quite small mob that is constituted by close brothers or cousins, and secondarily with either Evil or Priest, both of which are very large mobs and quite loosely connected. There is nothing contradictory about such multiple mob affiliations, and kigay will readily identify themselves using compound identifiers such as Evil-Kreator, Lica-Priest or White Lion-Bullet, though the history of conflict between Evil and Priest seems to weigh so heavily that no one identifies as both Evil and Priest. Figure 2.8.1 represents an attempt to map associations or alliances between mobs, as defined by any one or more kigay declaring a joint affiliation to those mobs. This information was gathered either from compound mob affiliations recorded in my mob membership list, or the compound mob affiliations that often appear in Wadeye graffiti (§3.6).



**Figure 2.8.1 Mob alliances. The discontinuous lines indicate connections that existed in the past, but have since been annulled.**

### 2.8.2 Permanency of affiliation

One point on which no firm statement can (yet) be made is the permanency of mob affiliation. As mentioned above, there are some men well into middle-age who still declare affiliation to mobs formed back in the 1980s or early 90s; but there may be others who participated in the early mobs who are now truly dissociated from mob identity. It will take some years more to get a clearer picture of whether mob affiliation really is “4 life” (as much Wadeye graffiti would have it), or whether it will be abandoned by most as they move beyond their kigay years. As for the longevity of mobs themselves, this seems to be variable. There are some mobs that once existed but no longer seem to have any declared affiliates (Mad Wolves, Red Devils), while other mobs have existed for twenty years or more (German, White Lion, Iron Maiden), and have new, younger affiliates conjoined by occasional father-son or uncle-nephew links.

The possibilities and limitations of mutability in mob affiliation can be seen in an episode that occurred with a certain kigay who I know quite well. When I first got to know LP, aged twenty-one, he was living in an area of town known as Pepenyi, and was affiliated with Evil-Bad Boys. At Pepenyi LP lived in a house with his mother and various relatives on his mother's side, with affiliations including Evil, Bad Boys and Megadeth. Some tension arose between LP and other people in the house, as well as with other kigay in Pepenyi, and LP started living with his *palngun*'s kin on the other side of town, in a new suburb named Nilinh. Other kigay from Pepenyi told me at this point, with some malice, that LP had changed allegiances and become Lica-Priest. When I asked LP himself about his mob affiliation, he ignored the question (a common response to unwelcome questions). The kigay living in the house that LP moved into at Nilinh were Lica-Priest, and since the Lica mob have been at odds with various Evil mobs in recent times, perhaps it was not possible for LP to make the move without a change of affiliation. However, after a short time living at Nilinh, LP fought with some kigay living there, and moved back to Pepenyi. At this point I noticed that he had

painted a new graffiti on a wall of the Recreation Hall, giving an elaborate initialism of his social identifiers (§3.6) along with “Evil Dave”, the latter being a reference to Dave Mustaine, the lead singer of heavy metal band Megadeth. The graffiti proclaimed his affiliation to be firmly back in the Pepenyi household.

The episode with LP suggests that mob affiliation is changeable, but not without a good deal of social friction. It also demonstrates that while certain compound affiliations are possible (e.g. any combination of Evil, Bad Boys and Megadeth), others are not (e.g. Lica cannot be combined with any of the aforementioned). LP has a certain degree of choice in how he places himself in the mob system, but the choice is between a limited set of options and unfortunately, in this case, all options seem to be accompanied by social tensions.

## **2.9 Summary**

The Wadeye metal mobs are a new form of social organisation that has emerged in a large and somewhat isolated Aboriginal town. They have some features in common with cognatic descent groups that have been documented among urban Aboriginal people, though their use of external entities as symbols for the kin sets has more in common with traditional clan totemism. The dominance of collateral kin relationships, however, makes the metal mobs quite different to any of these forms.

Perhaps the most intriguing question about the metal mobs is: have similar types of social organisation emerged in other remote Aboriginal towns? The existing ethnographic literature contains only occasional and brief references to such phenomena, though this absence of research may be attributed at least partly to anthropologists’ focus on the instability of older forms of social organisation, at the expense of identifying new ones.

We have also seen that affiliation to metal mobs is non-exclusive, is somewhat flexible, and that most of the mobs are quite small, the exceptions being the Evil

and Priest super-categories. Perhaps the overlapping nature of the mobs, and the shifting of Evil/Priest alliances makes these affiliations too complicated to be linked to linguistic habits: we will see in Chapter 7 that Evil / Priest affiliation does not seem to be linked to sociophonetic variables.

The next chapter describes kigay's subcultural codes and practices, in which we will see that the metal mobs are consistently evoked as social identifiers.

## Kigay subculture

### 3.1 Introduction

The previous chapter introduced the heavy metal mobs – a kin-based system developed by kigay in which heavy metal bands encountered via mass media are used as symbols for social groups. In this chapter I examine the cultural codes and practices that constitute the day-to-day life of the metal mobs, arguing that these codes are in general highly subversive, characterized by rejection of authority and primary loyalty to one’s metal mob peers. I argue that kigay culture can be treated as a “subculture”, though it is of course not identical to the canonical subcultures that have been studied in large cosmopolitan cities. Though Wadeye is much smaller and more remote than Philadelphia, Melbourne, or even Darwin, I consider “urbanisation” to be an appropriate concept for discussing the social changes that are unfolding in the Wadeye region. By the very fact of having grown up in town, the social and material foundations of kigay culture are radically different from the traditional bush culture of their grandparents.

### 3.2 An Aboriginal subculture

The most salient motifs of kigay culture are fighting, destruction and social disorder. General vandalism, break-ins, and joyriding are all very popular. Together with street fighting, domestic violence and smuggling marijuana in from Darwin, these activities ensure that most kigay experience incarceration at some time, and many are deeply recidivist (§3.7.1). In 2013 a compelling new local song *Darrarart* “thieves”, made with just a mobile phone and a Yamaha keyboard producing thumping dance rhythms, spread quickly through the

Wadeye mobile media network (Notes, 2013-06, see §3.5). The opening lyrics announce a sort of anthem for kigay subculture:<sup>14</sup>

*Kardu kigay kanyi darrart-nu purnedhanime*  
*Kanyi-wa murrinh penime-yu*  
*M\_\_\_\_, J\_\_\_\_, C\_\_\_\_, E\_\_\_\_, S\_\_\_\_*  
*Truck darrarart kumartnimenu*  
*Bere nantji-warda kanarartnimenu nantji spreiwanku*  
*ngumengapknime petrol-yu*  
*Ngarra waitpela, ngarra workshop*

These boys are going stealing  
This is their song  
[Announces the names of five kigay in his mob]  
They're going to steal a car  
Then they'll go skidding around in that truck, sniffing spraycans and petrol  
From the whitefellas, from the workshop.

*Darrarart* was a new addition to the rich network of musical, discursive and graphic representations that constitute kigay subculture. It is perhaps inevitable that a distinctive youth culture should have emerged, given that there are over 500 kigay living in Wadeye (Taylor, 2004, pp. 29–30), socialising primarily with their peers under little supervision or authority. As Ivory reports (2009: 298), there is considerable inter-generational malaise in Wadeye, with young men and old men mutually blaming each other for breakdown in traditions and civil harmony. I follow Brady (1992, p. 143), Hamilton (1981, p. 102) and Sutton (1978, p. 98) in hypothesising that youth subculture could not have existed before settlement, due to the much smaller numbers of youth living in the semi-nomadic camps of bush life. Aboriginal youth subculture must therefore be a

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<sup>14</sup> Another rebellious Aboriginal anthem is the Warumpi Band's *Jailanguru Pakarnu* (*Out from Jail*), see <http://aso.gov.au/titles/music/jailanguru-pakarnu/clip1/>.

very new phenomenon, the development of which has only been permitted by population growth in settled town life. Kigay recognise themselves as such, using the term *djenereitjin marra* “the new generation” to refer to themselves in opposition to those who were raised in the bush or during the Mission days (JL, 2013-06-22).

In the case of Wadeye this subculture is highly distinctive, no doubt because of the town’s geographic isolation. It has since the 1990s been dominated in particular by a series of subcultural conventions developed around heavy metal music. In the follow sections I describe in turn some salient elements of kigay subculture, in all of which the solidarity of the peer group, the metal mob, is a major theme. Wadeye’s heavy metal subculture provides a set of codes by which the close relatedness of kigay sharing a mob affiliation is frequently, almost obsessively evoked. But before this, I briefly review the concept of “subculture”, and the description elsewhere of Aboriginal “gangs”.

### *3.2.1 What is “subculture”?*

A “subculture” is both a cluster of people, and a cluster of practices, that forms a collective identity through opposition to cultural norms. There are two quite separate strands of scholarship discussing subculture: an older sociological literature originating in the United States, examining the cultural formations of youth delinquency; and a more recent strand emerging from British cultural studies, more concerned with the semiotic and discursive creations of post-war “urban tribes” (Williams, 2011). The former strand is concerned with social dysfunction (e.g. Thrasher, 1927), and has gradually been absorbed into the field of criminology. The canonical subcultures of the latter literature are intersections of music, style and ideology such as punk, reggae and heavy metal (e.g. Hebdige, 1979), and this focus on practices and gestures that define a group has much in common with the notion of a “community of practice” (Meyerhoff &

Strycharz, 2013).<sup>15</sup> In both older and newer conceptions of subculture, it is notable that subculture requires a “mainstream” culture against which it can stand in opposition – or at least, the subculturalists must perceive there to be such a mainstream (Williams, 2011, p. 8).

The Wadeye subculture I discuss here has elements of both youth delinquency and semiotic styling. As already mentioned, kigay are frequently involved in criminal activities and would be considered “socially dysfunctional” by any conventional measure (§3.7). Whether such measures are appropriate or constructive is another matter, but it is true that one of my motivations for writing this ethnography is to try to explain or at least accurately describe a group who are generally seen as a *problem*. On the other hand, kigay subculture has clear musical, stylistic and semiotic codes, suggesting an analysis focused on meaning-making and self-identity rather than dysfunction. But in the case of kigay I do not find the two approaches to be contradictory, since being subversive, dysfunctional and illicit is very much part of the identity-work kigay engage in.

On the other hand, kigay culture is unlike a prototypical subculture because, within the social world of Wadeye, heavy metal does not stand as one of several subcultural options among which kigay choose. Instead, the metal mobs system is normative among kigay, because all or almost all accept it as part of their kin-based identity to some extent. One might argue that kigay live in a subculture in opposition to “mainstream Australian culture”, but as I argue below (§3.8), their social world is in fact quite detached from the rest of Australia. The other difference between kigay culture and a prototypical subculture is the lack of socioeconomic hierarchy or “class structure” in Wadeye. In earlier theory, class structure was seen as underlying the oppositional stance of subcultures; though

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<sup>15</sup> In this thesis I have used the term “subculture” rather than “community of practice” because I find the specifically subversive nature of the former to be highly relevant to the Wadeye situation. But on my reading a subculture is in fact a specific type of community of practice, so I also consider the Wadeye kigay to collectively form a community of practice.



more recent commentators generally argue that subculture has become detached from socioeconomic class (Weinzierl & Muggleton, 2003).

Though there is substantial literature on youth subcultures, there is little dealing with situations closely akin to Wadeye. The vast majority of subculture literature deals with large, cosmopolitan cities, especially in Britain and the United States. I do not know of any ethnographies explicitly identifying “subculture” in societies that have only recently transitioned from hunter-gatherer to sedentary life. In fact there is scarce literature that looks even beyond “the West”, though there are a few excellent studies of globally transplanted subcultures such as the reggae, punk and death metal scenes in Bali (Baulch, 2007), and hip-hop culture in urban Tanzania (Weiss, 2002).

### *3.2.2 Aboriginal “gangs”*

Anecdotal reports suggest that youth “gangs” are quite common in the larger remote Aboriginal towns, but very little has been written about them. In Brady’s work on petrol sniffing she describes youth gangs of Arnhem Land in the 1980s, whose gang names and fashion sense are quite akin to the Wadeye metal mobs, though there is no detail on how these gangs are constituted or what “membership” actually entails (1992: 89–91). Martin’s ethnography of Aurukun describes bands of subversive teenagers who vandalise the town, characterising their role in contemporary Wik society as “sub-cultural” (1993: 19–20, 169–73). There is also some brief documentation of Tiwi youth rebellion on Bathurst Island (Robinson, 1997), which does mention in passing that some youth there have taken on heavy metal fashion.

The Wadeye metal mobs are elsewhere referred to as “gangs”, but I avoid this term since I find it misleading. Both “gang” and “mob” are used by the kigay themselves when speaking English, and both are borrowed into Murrinh Patha, though “mob” is the more common term (§4.7.3). Of course kinship connections are also often found connecting members of urban gangs (Mendoza-Denton,

2008; Thrasher, 1927), and the graffiti practice of the Wadeye mobs may be partly inspired by urban gang images. As mentioned previously, *The Warriors* (1979), a dystopic film about urban gangs in New York City, has been mentioned to me by some local people as a particular influence in the early emergence of the Wadeye mobs. But I would argue that the Wadeye mobs *style themselves* on true gangs, rather than being akin to them. The term *gang* is usually applied to groups involved in organised crime, or associated with ethnic minorities in large cities. Neither of these applies clearly to the Wadeye metal mobs.<sup>16</sup>

### 3.3 Fighting

Wadeye is characterized by endemic fighting, usually nocturnal, between groups of people numbering from about a dozen to a hundred or more. There are some periods of relative quiet, but as far as I can tell from newspaper archives and oral reports, fighting has been a fairly regular occurrence at least since the end of the Mission. The period around 2006–7 involved particularly intense fighting, giving Wadeye a prominent place in the national imagery of remote Aboriginal towns “in crisis” (Figure 3.3.1), provoking the Federal Government to enact its Northern Territory National Emergency Response, more familiarly known as “the Intervention” (Altman & Hinkson, 2010; Toohey, 2008). On the one hand this generates a distorted, unidimensional image of kigay as villains quite possibly beyond redemption; but on the other hand it is true that kigay often take to the streets to fight. I attempt here to give an accurate portrayal of the undeniably disruptive side to kigay culture, but to integrate this into a more nuanced, “humanised” portrayal.

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<sup>16</sup> However, when mobs are in conflict they may occasionally take on some gang-like characteristics in the use of organized intimidation to dissuade people from reporting them to the police or testifying against them (Notes, 2013-06; Ivory, 2009, p. 317; for discussion of intimidation relating to Warlpiri violence see Finnane, 2013).

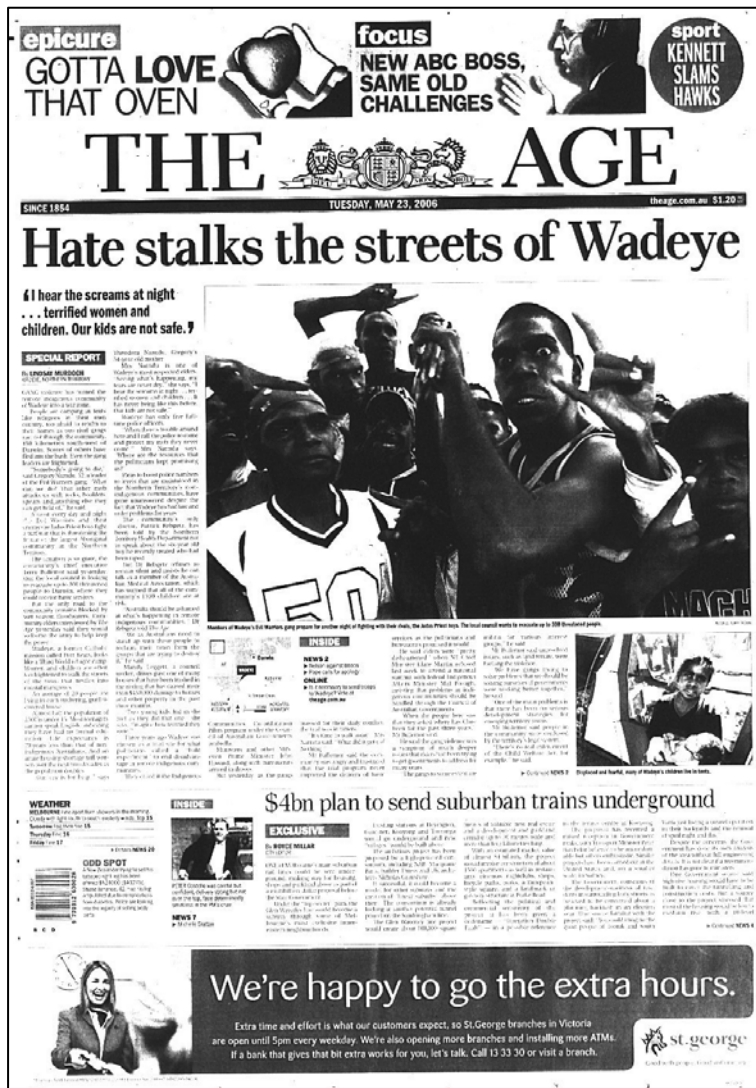


Figure 3.3.1 Front page of *The Age* newspaper, 23 May 2006

Fights often start over personal matters between individuals: sexual jealousy, damage to a vehicle, an allegation of cheating at cards.<sup>17</sup> But the intensity of solidarity among kin tends to turn these into group conflicts, of which the most visible manifestation are the “heavy metal mobs”, kin-based groupings of kigay (§2.7) who engage as units in street fighting. Fights never seem to be resolved in a single session, but rather involve a series of night-time conflicts that can last for weeks or months at varying levels of intensity.

<sup>17</sup> Some fights do concern wider tensions between groups, though I have the impression that these are less common. For example in late 2012 there was protracted fighting that was at least in part caused by conflict over rights to a tract of land (FN 2012-09, 2013-01).

Ivory gives a good description of how a nocturnal confrontation foments (2009: 317–8), with a gradual crescendo of shouts, wolf-whistles and banging on metal as one group calls upon the other to fight. A typical formation is a face-off between two groups at either end of a street, or very often at either end of a narrow alleyway leading off the main street, known as *da gef* (< gap); but there are other more complex fights that involve swarming around houses or in open areas, and sometimes more than one group ganging up on another.

Fighting is dominated by projectiles thrown by the groups of kigay at a distance of around 20–40 meters. These include rocks, metal bars, hatchets, and anything else that comes to hand: *tju bailen tju naip, tju eks, tju enithing-matha* “they fight with knives, axes, any kind of weapon” (Notes, 2011-10). The vast majority of these projectiles do not hit a target, and indeed the number of serious injuries resulting from fighting seems very low compared to the spectacle and disruption caused. Kigay often describe hand-to-hand combat as part of their fight narratives, but this has not occurred in any of the fights I have personally witnessed. The regular Wadeye police are only on duty two at a time, so they can do little more than watch fights. For more serious or protracted fights or “riots”, further Tactical Response police are flown in from Darwin, usually resulting in various arrests.

The contemporary form of projectile fighting has quite a lot in common with fighting documented in the 1930s (Stanner, 1959, p. 69). Stanner recounts how two teams lined up at 40 metres’ distance and threw spears at each other, generally dodging the projectiles, with much shouting and display of anger, but only infrequent physical injury. In general this matches the contemporary fight, except that a wider range of projectiles are now used, and these usually don’t include spears. However I do not mean to say that fighting now is “the same” as pre-settlement fighting, or is part of some immutable tradition; even if the physical actions were identical, the change of social context would today give these actions a different significance.

Even among Wadeye locals, the blame for fighting is always placed squarely with the kigay, but this is somewhat unfair. In several nocturnal fights I have witnessed, the kigay are indeed at the frontline of two groups, engaged in the actual exchange of projectiles. But right behind the kigay, large numbers of women, children and older people mill around, shouting taunts and obscenities at the enemy (Notes, 2013-01). Speaking rather piously in the clear light of day, some of these same older people will strongly disparage kigay for causing chaos; but kigay see themselves, and are seen by others, as fighters. Whether it is their own kin encouraging them to fight, or the chorus of other locals, whitefellas and mass media disparaging them for fighting, it is altogether clear to kigay that this is their entrenched social role.<sup>18</sup> Though kigay sometimes express regret about the fighting, they also celebrate it as a core part of their identity, and fights are one of the most popular themes for story telling. As one kigay tells of recent fighting between his own Evil mob and their enemies Lica, he notes how the police tried to make them stop, but *kardu mutmuttje-matha*, “we just wouldn’t listen” (DP, 2011-09-01a). In fight narratives the battling kigay are often portrayed dramatically as *ku soldje* (< soldiers) or even *thri andret soldje* “300 soldiers” in reference to a recent film about the Spartans’ battle at Thermopylae (JL, 2013-06-22).<sup>19</sup>

### 3.4 Marijuana

Another subversive dimension to kigay’s activities is marijuana smoking. This practice is so pervasive among kigay that I have not yet made the acquaintance of any who does not smoke. All the kigay I know well smoke every afternoon or evening, and are quite open about the fact. They say that it makes them feel good, and one adds that it helps him sleep. Marijuana is often favourably compared to alcohol, which has not been legally available in Wadeye since 1995 (Whittaker,

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<sup>18</sup> A similar social structure has been described in Philadelphia’s Puerto-Rican ghetto, where for young men violence is the role that is covertly or sometimes overtly endorsed for them (Bourgois, 2013).

<sup>19</sup> *300*, Dir. Zak Snyder, Warner Bros 2007.

2007), but is smuggled in to some extent, and is mostly consumed by older people. Kigay associate alcohol with violence and noise, while they see marijuana as *watmam* “peaceful”. Marijuana dependence (Johns, 2001) is clearly quite prevalent among kigay, who describe their unhappy state on days without marijuana as *tretjinet* (< stretching out) or *tisinet* (< ? twisted head). But rather than seeing dependence as a problem, kigay seem to focus more on shortages of marijuana as a problem, complaining for instances that such shortages lead to more fighting:

*Mi mami ngatha-ka, mi parnu-ka ini-ka kanyi warda, tju kuy. Nyinyi-ka tisinet warda ini-yu, kardu-wa tju kuy ini.*

When there isn’t any marijuana, people fight. You get that “twisted head” (?) feeling, then you’re going to fight. (CK, ED, 2011-09-17\_03)

Discussion of who is selling marijuana, prices and the quality of supply is a staple of conversation. At \$50 or \$100 for about a gram, marijuana is extremely expensive in Wadeye, and kigay usually gather this money by forming alliances in groups of 2–4, and trailing around town asking for money (“humbugging”) from various kin. These economic alliances and shared smoking experiences form one of the basic daily practices cementing the connectedness of kigay in metal mobs. This is evident in a narrative fragment where a kigay describes how he came to be associated with the Lica mob on his father’s side:

*Ngarra Ng\_\_ kanyi matha ngay-yu stak ngardidha kardu wakal-kathu, thama. Kigay purrkpurrrk nganki-yu thama, i ngay-ka manangka feel-like-it-wa ngarra mama ngay-yu wurdawarda. Kardu ngay-ka mempurrabirl pigunu nginipuny maniperr kanyi-warda nganinthariwak ngardi-yu, “Aa,” ngay ngamam “Kardu kigay kanamkawuk kanyi matha.” Metritj, mi ne, mi ... le ngardingkawukdha mi kantje, thama, yuwu mi yini-ngu. Ngurdiniwi ngardidha, pule riliwan matha.*

I was always stuck with Ng\_\_ when I was little, you know. We were all little youth, you know, and I didn’t feel like staying at my mum’s house any more. I turned myself to the boys here, I was following them, I said “Ah, this is my real mob right here.” There were mattresses, and ganja ...

We enjoyed the ganja, right. I started smoking, that's true brother.  
(CK, 2011-09-17)

Kigay or older men sometimes return from Darwin with substantial cannabinoid booty, which may be distributed gratis among kin, much as men distribute meat on the return from a hunt (Falkenberg & Falkenberg, 1981, p. 88). On the other hand, when kigay can afford to buy marijuana independently they often prefer to smoke it alone without kin demands. One kigay who has his own bedroom (many do not) tells me that he quickly retreats there when he buys marijuana, and pretends to be asleep if anyone asks for him (Notes, 2011-07).

### **3.5 Heavy metal and the social/digital media network**

The uses of heavy metal at Wadeye are highly elaborate and idiosyncratic, with some facets in common with globalized metal subculture, but much that is totally distinct. In the last chapter I described how heavy metal bands have taken on a totem-like function in social organization. I here discuss uses of heavy metal music, lyrics and imagery.

Heavy metal arrived in Wadeye soon after it emerged as a rock'n'roll subgenre in the UK and USA in the 1980s (Christie, 2003). The main medium of transmission was the music video program *Rage* that commenced broadcasting in 1987, at about the same time that Broadcasting for Remote Aboriginal Communities Scheme (BRACS) commenced television broadcasts in dozens of remote Aboriginal towns, including Wadeye (Molnar & Meadows, 2001). Various Wadeye men have related to me how they first discovered their favourite metal bands on *Rage*, and how they would remember the band names so that they could buy cassettes – later CDs – from Kmart on their next trip to Darwin. For example:

*First hear television ngarra Rage. 'Ah, I wanna be like that man! Ngamanu mangi kardu nimi-ka kanarntel, ini-ka. Nukunu-ka marda manganart kardu geng ini-ka, ngay-ka kanyi le nganam. Kardu pelpitj wiye, pemarr pangkuy.'*

*Yuwu, first-time ngay binyepup, ngay-ka mam 'Nangkul pup? Ku bamam. Tjung patha kanyi,' mam ne. Good songs. And I understand ngamam what it's about. Tjung ini ngarra war, war story kama mam. Tju murriny story pumam.*

I first heard [White Lion] on the television program *Rage*. 'Ah, I wanna be like that man! I will be like that man singing, like that. I want to make my gang like him, this is something I like. A crazy man, with long hair.' Yes, the first time I heard them, I said, 'Who is this? A whitefella. This is a good song,' I said. And I understood what it was about. That song was about war, maybe a war story. It was a fighting story. (SL, 2011-10-13)

Heavy metal is played at high volume from stereo systems around Wadeye. This makes an aggressive demarcation of social space – by playing the music of his totemic band, his *ku spidi* (< speed metal), a kigay announces the presence of the associated metal mob. For example, kigay staying at the house adjacent to where I stayed in 2012 are Tera mob, and they often played Pantera music loudly on their back porch. Other kigay visiting my house readily recognised this as Pantera music, and knew that this was the *spidi* of the kigay living in that house. Depending on context, the area around this house could be described as “Tera area”. The association of *ku spidi* with particular parts of town is further demarcated by graffiti, as will be described below.

The playing of heavy metal music at Wadeye was undoubtedly first established as a loud public statement using home stereo equipment; this practice is still current, though mobile phones now offer a second mode of audio reproduction. Their use at Wadeye is now very widespread, though the manner in which this technology is used by kigay has some key differences with respect to urban Australian norms. One major difference is that phones are not as firmly “owned” by a particular individual, but rather tend to be passed around among kin. All phone models now have the capacity to store, exchange, and play back digital media in image, sound and video formats, and at Wadeye this aspect of the phone as a *generalized media device* is used to create a social network of digital exchange. Media files are passed around using Bluetooth wireless file transfer (Wyant, 2006), in which kigay are highly proficient – along with almost all the



other myriad functions available on contemporary phones (for literacy aspects of phone use see §4.6.3). The wandering of phones (not just “mobile phones”, but “socially mobile phones”) from person to person means that each phone accretes a collection of image, audio and video files that have been added by its various users. Since phones move between close kin, this collection tends to be a fairly coherent set of media with respect to socially symbolic *ku spidi* represented in songs and band images. This combination of technology in social context (cf Doron & Jeffrey, 2013) can be thought of as a locally developed digital/social media network.

When I ask kigay about their mob affiliations, they will often not just tell me their affiliation, but demonstrate it by playing a sample of the *ku spidi* on their phone. Some kigay do not particularly like heavy metal music, but nonetheless have it on their phone as a function of their place in the kinship media network. Other kigay, who are more enthusiastic about the music, habitually play tracks on their phones as they walk around town. Better sound quality can be achieved by plugging in headphones, but this is less common, perhaps because kigay walking around Wadeye are always moving through a dense social space in which relatedness is both valuable and pervasive – in contrast to, say, commuters in Australia’s urban centres, who move through a space filled with strangers.

Other media genres feature in the network, including AFL football team images, photographs of oneself and one’s kin – sometimes with mob identifiers superimposed using image editing software on the phone (see Figure 3.5.1) – pornography, and locally made videos that most often portray dancing or fighting (see also §4.6.1). The digital/social media network is now the primary means by which heavy metal is circulated and “performed” in Wadeye, and it is also a key technological basis for the expression of social relatedness.



**Figure 3.5.1 Mobile phone background image, created using image editing software on the phone. Used with permission of image creator, KM.**

Finally it should be noted that *ku spidi* affiliations are used as “nicknames”, and are one of the most frequent ways of referring to kigay as individuals (ex 3.5.1), or as groups (3.5.2). This follows a well-established social convention of “circumspect reference” – using various other social identifiers to avoid people’s given names (Blythe, 2009; Stanner, 1937). The traditional forms use place names or totems to identify an individual; thus the kigay’s use of *ku spidi* for the same purpose shows another dimension in which metal bands are totem-like in their social function.

(3.5.1) kanyi-thu kanyemutnimenu matha **Eitbrit** marra-matha ini-yu  
*this guy will give us money, then we'll go see **Hatebreed***  
(PP, 2012-06-02)

(3.5.2) nganardi, waa **Eitbrit** pumengithanime  
*I went in (to the bush), "Waa!" the **Hatebreed mob** were chasing me*  
(KM, 2012-06-20\_28)

### 3.6 Graffiti

The circulation of heavy metal at Wadeye involves not just the music but also graphic elements in the reproduction of written names, symbols and other imagery. Heavy metal band t-shirts are one mode in which such names and images circulate, being physically attached to kigay. But social signification is more intensive in the names and images that kigay reproduce as graffiti. The walls of Wadeye are richly adorned with graffiti that is always focused on social identity, and never of the political or philosophical variety. Though most kigay have limited competence in English (§4.5), all graffiti is in English rather than MP – though the text mostly consists simply of proper names and encoded initialisms (see below), which are therefore not in any language as such. A similar pattern is found in Warlpiri graffiti at Lajamanu (Nicholls, 2000). Graffiti is painted or drawn onto both public buildings and private houses, where it appears mostly on outside walls but also to some extent inside. Graffiti is often painted on road surfaces, benches, road-signs and any other markable public surfaces, including occasionally trees. Kigay sometimes use pen to draw names or insignia of their *ku spidi* on the skin of their arms, creating pseudo-tattoos – though I do not know of any kigay who has a permanent one. Kigay's graffiti messages are almost exclusively declarations of social identity, either individual, or jointly declared by two or more kin. Here are some examples of individual declarations:

- (1) GSW FEAR ON ME<sup>20</sup>
- (2) EVIL TERA THATS ME GCYD ONLY TERA IN 2005
- (3) EVIL DAVE LJMPMK
- (4) SJKYDK G卐 P FOREVER IN 2008
- (5) BLACK LABEL SOCIETY 4 EVER ZAKK WYLDE 2007 4LIFE

Example (1) is a simple statement of Fear Factory affiliation by an individual represented as GSW. The next three examples include more elaborate individual initialisms: GCYD, LJMPMK and SJKYDK. These represent highly specified social identity, with initials representing both the administrative and Aboriginal names of the individual, as well as totem, initiation name, clan estate and other personally significant place names. Such matrices of individual identity are deliberately difficult to decode, and are recognisable only to fairly close kin. Examples (2) and (3) include compound mob affiliations : Evil + Tera; Evil + Megadeth (represented obliquely by reference to Megadeth's lead guitarist, Dave Mustaine; see §2.8.2). Example (4) is probably a reference to German Punks (partially represented by the swastika, which is a graphic code for the German mob), or perhaps a compound reference to German + Priest. These mob encodings may be difficult to decipher for outsiders, but are universally understood by kigay.

Example (5) references a heavy metal band, Black Metal Society, which as far as I am aware does not have a mob associated with it. It also mentions the name of the band's lead guitarist, Zakk Wylde. I interpret this graffito to be a statement of personal musical taste, rather than a mob identifier; such a personal metal affiliation is sometimes described by the individual kigay as *praibat ngay*, "my own private band".

Here are some examples of jointly inscribed graffiti:

- (6) MAD BOYS FF BFLN MTBD DBLM ANLP

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<sup>20</sup> All graffiti here is documented in the author's photographic collection, image numbers 4896, 4998, 5781, 5403, 5452, 5429.

(7) LICA BIG T MRKTD STDWM OU2F

Example (6) declares the relatedness of four kigay, and affiliates them as a group to the Mad Boys and Fear Factory (FF) mobs. Example (7) declares a joint affiliation to Lica (Metallica) and Big T (Testament), with the added code OU2F standing for “only us two forever”. Such statements of apparent exclusivity (also present in example [2] above) are rather curious because they are clearly not statements of fact: GCYD is certainly not the “only” affiliate of Tera, and in fact what his graffiti affirms is relatedness to others. There is also plenty of Wadeye graffiti written by girls, which tends to focus more on romantic connections and other forms of social relatedness that are not expressed in terms of metal mobs – but as previously mentioned the study of girls’ lifeworlds is generally beyond the scope of my research.

Finally, Wadeye metal graffiti is not limited to alphabetic names, but also includes various graphic devices, of which we have already seen one – the swastika. There are various other graphic symbols associated with various mobs, as exemplified in Figure 3.6.1. Most of these are copied from heavy metal album covers, though there is some innovation and experimentation in how these are reproduced.



**Figure 3.6.1** Graphic symbols of metal mobs, clockwise from top-left: German (swastika) + In Flames; Bad Boys (copied from a popular car sticker); Fear Factory (logo featured on album covers); Evil Warriors; Chimaria (logo featured on album covers); Machine Head (logo invented in Wadeye?); Saxon (logo featured on album covers); Judas Priest (device featured on album covers).

### 3.7 Disengagement from mainstream institutions

Kigay participate very little in institutionalized work and education. They implicitly reject these institutions as irrelevant or inappropriate to the identities and lifeworlds they have created, presenting a quite extreme example of what is termed “disengagement” in the literature on Aboriginal youth (e.g. Fordham & Schwab, 2012).

The norm for males at Wadeye is to attend school sporadically as children, and in most cases not at all once they mature into kigay. Taylor (2010: 29–31) calculates that only 19% of children aged 4–17 years attended school consistently (i.e. 4+ days a week) in 2009. Of the remaining children, half attended 2–4 days a week, and half less than two days a week. But rates of attendance among kigay must be somewhat lower, since attendance by age is skewed towards the youngest children (p. 26). These figures are borne out by the self-reporting of kigay I know, most of whom say they went to school only a little. One kigay in describing his Machine Head mob to me pointed out, “none of us are clever boys, went to school half-half” (Notes, 2011-10).

Some kigay, once they are older, begin to recognize the value of education and wish that they had gained more literacy skills. One kigay (RT, age 30) who is unusual in speaking fluent English and having spent time in Sydney, told me:

I wish I had gone to school more, so I could know more about this computer, and how to write the words. I went to school half-half. My dad always said to me, “School is the best place for you to be. It will be good for you.” So I went to school. I always went along with my schoolboy friend. But I would always say to him, “Let’s run away.” We would go to his house and play. We played with the pram... We played rally cars.

(Notes, 2011-08-28)

With regard to employment, 71% of *kigay* are “not in the labour force”, with the remaining 29% divided between “training”, “Community Development

Employment Program” (CDEP), and “mainstream” employment (Taylor 2010: pp. 34–36). However I consider that even 29% would be an over-estimate of the proportion of kigay who are meaningfully engaged in work or training. Over half of these (134 kigay) are registered with the CDEP program, but in my observation this is a largely empty bureaucratic formality, with actual daily attendance between 0–10 kigay.

Most kigay receive fortnightly social security payments as their income, which requires occasional visits to the Centrelink office to transact various bureaucratic procedures. Kigay sometimes request that I accompany them for these visits, because they struggle to understand what they are being told (in English) about changes or conditions on their payments. A few dozen kigay are not registered at all for social security, even though they are perfectly eligible for this income and have no other source except for their kin. I asked some of the unregistered kigay why they don’t sign up for the payments, to which they replied with silence. In lieu of any direct explanation, I hypothesise that this unregistered minority represents kigay whose alienation from whitefella institutions is so great that even “free money” does not lure them into the uncomfortable interactions of the Centrelink office.

In summary, kigay’s oppositional stance leads them to reject almost all forms of authority, but most especially the institutions of whitefellas. In the §3.8 I further examine kigay’s attitude to whitefellas and the world outside Wadeye.

### *3.7.1 Incarceration*

A cruel irony of institutional disengagement is that the one institution kigay regularly “engage” with is the criminal justice system. Around 10% of kigay are in Berrimah prison, Darwin, at any one time, and in the year 2008, 30% of kigay were arrested at some point (Taylor, 2010, pp. 46–47).<sup>21</sup> There are no figures

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<sup>21</sup> Taylor gives the 2008 figure as 15%, with no gender breakdown. But since he also states that the prisoners are “almost all men”, I reckon the kigay figure to be around 30%.



recording what proportion of kigay have at least one experience of prison, but among those whom I know well enough to know such things, almost all have been at least once. During the three years I spent visiting Wadeye for this thesis, most of my main research collaborators were incarcerated at some point.

Ivory (2009, p. 302; citing Demarchelier, 2000) reports that some kigay actively seek incarceration, while Toohey (2006) reports a leading Evil Warriors affiliate dismissing this as an absurdity. I believe that the truth is somewhere in between: all kigay I have asked agree that prison is a bad place, that they have “no life” there and miss their kin. On the other hand kigay do sometimes quite deliberately seek trouble with the law, making no serious attempt to evade punishment, which I suspect is a form of protest against their kin (Notes, 2013-06; Martin, 1993, p. 173). The one positive aspect of prison noted by kigay is the regular food service. In Wadeye many kigay do not eat regularly, for reasons I do not fully understand, though one kigay has explained to me that not eating is a sign of a strong spirit (Notes, 2013-06). Prison food enables kigay to gain weight beyond their usual malnourished state.

Kigay meet Aboriginal people from across the Northern Territory while in prison, which may be an important source of cultural and linguistic diffusion (§4.5.2).

### **3.8 Whitefellas and the outside world**

In this chapter and the last I have attempted to show how kigay fit into their social world. In this section I discuss the limits of this social world, and kigay’s perceptions of what lies beyond.

Of course there is no actual boundary to kigay’s world; anthropologists in recent decades have rightly been critical of older structuralist models that present exotic “tribal” people as living in bounded, isolated societies (e.g. Hinkson & Smith, 2005; Keesing, 1994). But the contrasting position, arguing for

intercultural fluidity and porousness of categories, can easily be overstated (§2.5), and in comparison to young people growing up in Australia's cosmopolitan centres, kigay do in fact have quite a bounded social world. Most kigay have been to Darwin or Katherine, the two large urban centres that can be reached in less than a day, but for many these have only been brief visits, of which their impressions are primarily negative. They say that Darwin is dangerous, because it is full of strangers, and especially drunks (Notes, 2012-01, 2013-01). Transport back and forth between Wadeye and Darwin is very frequent, with two planes a day, and road access during the dry season; but this mobility is dominated by older Aboriginal people and whitefellas. There are a few kigay who are comfortable in Darwin and travel there regularly, but they are a small minority. A few have also been to larger cities in southern Australia, especially on school trips, or in a few cases for extended school attendance in rural Victoria. But this is not representative of most kigay's experience.

This is not to say that kigay are not curious about *da atsaida* "the outside world", but it is curiosity of an exotic and unknown Other. For example, the following exchange occurs in one of the conversational recordings. The three speakers are kigay sitting on the beach near Wadeye, watching the sun going down over the Indian Ocean. None of them have ever travelled further than Darwin.

DP: da atsaida pangu-re dampurrallarrang  
*(the sun) is shining on them somewhere out there*

MK: wakay ngarra mam ini-ka wakay  
*it's already shining there now*

RM: pankarpurl-warda  
*the sun is coming up now*

KM: pankarpurl-warda, spidi  
*the sun is coming up now, spidi*

RM: obasi na?  
*overseas, right?*

KM: obasi  
*overseas*

DP: Melbun da manitjpirr ini-ka-warda ngarra seim nekinime-yu?  
*Is Melbourne the same time as us?*

KM: Tjipinyi-warda pangu. Wakay tjipinyi ngalla-warda pangu-yu  
*It's night there now. It's totally dark there now.* (Blythe 2012-07-09)

I once looked at a world map with a kigay, and I showed him the location of Wadeye. I asked if he knew what the countries were across the ocean to the north, and he replied “Timor” (correctly), and “German” (incorrectly, and presumably influenced by the Wadeye “German mob”). He then added that in Germany, “They’ll kill you right away” (Notes, 2012-06).

The travel beyond Wadeye that is most familiar to kigay is to other Aboriginal settlements of various sizes within 100–200km, especially Palumpa, Wudipuli, Daly River, Emu Point and Fossil Head. In turn, Aboriginal people from these places often visit Wadeye. What distinguishes these places is that they are bound by kinship ties. Kigay’s social world generally extends as far as their recognized kin relationships extend, and beyond that is *da atsaida*. Kigay are sociable with people with whom they are in kin relationships, but are generally uncomfortable with those who don’t fit in this network. This is true to some extent of all Aboriginal people at Wadeye, but older people and women are more likely to be moderately comfortable interacting with “strangers”, while kigay overwhelmingly are not.

*Da atsaida* is populated largely by whitefellas, though distant Aboriginal lands such as Western Desert or Warlpiri country are probably also *da atsaida*, since they have very few kin connections to Wadeye. This is further supported by

linguistic evidence from noun classifiers. Murrinh Patha has a 10-part noun classifiers system that exhaustively categorises the world (§4.7.1), and relevant here are the classifiers *kardu*, for socially recognized persons, and *ku*, which includes animals, supernatural beings and non-Aboriginal people (Walsh, 1997).<sup>22</sup>

This evidence suggests a generalization for the *ku* class: it includes all animate beings that are not part of the Wadeye social world,<sup>23</sup> the limits of which are primarily defined by kinship. Whitefellas are therefore generally *ku* – even those who live in Wadeye, because in most cases they do not socialize with Wadeye Aboriginal people beyond the bare minimum required during the workday. Therefore they remain “strangers”. However, although whitefellas in general are classed as *ku*, specific individuals can be classed as *kardu* if they become sufficiently familiar. For example, there are two instances in my conversational recordings where kigay who know me reasonably well refer to me as *kardu* (KM 2011-08-16; SL, 2012-06-12), while others who know me less well refer to me as *ku*. Whitefellas may also be referred to as *kardu* in careful speech, presumably to avoid offence (Notes, 2011-05, 2011-08).

### 3.8.1 Whitefellas

There is much hostility between kigay and whitefellas, which has been one of the major challenges of my field research – though to the extent that I have been able to overcome instinctive hostility, this has also been one of the major rewards (§1.4). Most whitefellas in Wadeye live behind barbed-wire fences (cf. Musharbash, 2010), in some cases in multi-house compounds. In turn, Aboriginal people and especially kigay can be fairly hostile towards a whitefella encroaching on their domestic space, and there has often been tension when I

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<sup>22</sup> I believe that while in Wadeye I also on one occasion heard *ku* being used to refer to distant, unrelated Aboriginal people. However I cannot find any record of this in my fieldnotes.

<sup>23</sup> Though this does not quite exhaust the *ku* class, since it also includes money, female genitals, and animal-derived products such as meat or honey, which are not in themselves animate.

attempt to visit kigay of my acquaintance, and other residents who don't know me show displeasure at my presence. Kigay's hostility towards whitefellas is usually evident in deeds rather than explicit statements, but I have been addressed as "whitefella cunt" by children in the street (who must have heard this from older people who would avoid using it in the presence of an actual whitefella), and a kigay friend once explained to me that he does not like whitefellas in general, because they are mean in general, and in particular don't share their tobacco (Notes, 2011-08).

Whitefellas are seen as having almost inexhaustible supplies of material goods, which we keep to ourselves in our locked up houses. When kigay visit the places I stay in Wadeye they stare wide-eyed at the array of *stuff* inside, so unlike their own bare houses. In more than one of the conversation recordings, a kigay who has visited my house relates a wildly exaggerated story of material wealth to the others, who may never have been inside a whitefella house, except for perhaps on a break-in. In another recording one kigay picks up a colour brochure from an electronic goods store, and another asks him what's there. He answers *nantji waitpela stap damatha* "just whitefella stuff", and throws down the catalogue, apparently uninterested in these goods (WL, 2012-06-02). Kigay are notorious thieves, opportunistically taking whatever might come to hand. Things that have been taken by visitors to my house include MP3 players, pens, essentially useless cable connectors, spoons, cigarette lighters and my toothbrush.<sup>24</sup> But these objects may soon be just as casually discarded, and kigay show little interest in accumulating material possessions. In a more positive light, kigay sometimes note with admiration that whitefellas have sophisticated mastery of technology, and in particular can get almost anything from the internet (DP, 2011-09-01a).

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<sup>24</sup> A whitefella working in Wadeye told me that one night when kigay broke into his house, making a difficult entry by removing a metal grate, they took only a carton of eggs and a bottle of softdrink (Notes 2011-08). On another occasion a kigay of my acquaintance was let off lightly after breaking into the town shop and stealing just a single tin of tobacco and rolling papers.

There is on the one hand overt hostility and a sense of almost irreconcilable difference between kigay and whitefellas. But on the other hand, kigay imaginatively identify with whitefella idols, especially where these provide a model of autonomy and rebellion. An earlier hint of this can be found in recollections of 1970s “motorbike gangs” – the precursors to the heavy metal mobs – who adorned themselves “with proper whitefella boots, gloves and scarfs” (Furlan, 2005, p. 221). Similarly, I mentioned above that in relating a fight, kigay portray themselves as *ku soldje*, and it is interesting to note that in doing so they re-classify themselves as *ku*. Kigay also sometimes refer to themselves as *ku gengsta* (< gangster) (Notes, 2011-10). But perhaps the most elaborate identification with whitefellas is in the heavy metal affiliations. We have already seen that groups of brothers and cousins refer to themselves as Machine Head, Megadeth or whatever other whitefella band they affiliate to as a mob (§2.7). But furthermore, individuals in a metal mob can have individual affiliations within the relevant band. So, for instance, LP is identified especially with the lead singer Dave Mustaine from his *ku spidi* Megadeth. He uses the individual moniker Evil Dave in graffiti. All things relating to heavy metal are classed as *ku*, which could be either because they are associated with whitefellas, or because they are associated with evil spirits. The association of heavy metal with a good/evil cosmological split will be discussed in the next section.

### *3.8.2 Perceptions of Aboriginality, and a good/evil cosmology*

How do kigay see themselves in comparison to whitefellas and more generally *da atsaída*? I have already noted that they tend to embrace the image of themselves as destructive and rebellious, and they are additionally aware that people in *da atsaída* see them in this way. There was a notorious incident in 2007, when video footage of a riot that was shot in the town, and later made it onto national television and the internet. In relation to this one kigay explains:

*Wurda-warda mange pana piyemum ku ngalla-ngalla-yu. Da Sitni, Melbun pawathu pibimkawuk, pibimdjewup-pibim tju vailens-yu ... Da-ka Purtkits-*

*yu da-ka Rambo City-wa pumamna-yu. Da mangini atsaida anaka da mangini violence-imini pumemdha-panam, da atsaida pana-ya Efrika da mangini ini-ya.*

The government said we shouldn't act like this. Down there in Sydney and Melbourne they hear about the violence ... They call Port Keats "Rambo City". It's like those violent places overseas, like Africa or something.

(JL, 2013-06-22)

Through comparison to whitefellas, and through imagining themselves in whitefellas' eyes, kigay come to view themselves as *kardu tjipmam* (PERSON + black) "Aboriginal". They express some positive views about Aboriginal people, noting for example their sharing of food and tobacco, their right to their own country, and sometimes point out to me proudly certain Aboriginal physical dispositions, such as sitting on the ground rather than chairs, or walking barefoot.

But kigay also sometimes express an exasperated view of Aboriginal people, criticizing their own people for humbugging, fighting and not working. These critiques are often "broadcast" in public to no one in particular (Walsh, 1990), and Facebook offers a new medium for such broadcasts. Figure 3.8.1 illustrates one such broadcast, though this is by a middle-aged woman rather than a kigay.



**Figure 3.8.1 A public "broadcast" unfavourably comparing Aboriginal and whitefella attitudes to private property (Facebook feed, 17/02/2014)**

But there is also a less clearly articulated discourse, apparent in certain stories and statements, which puts Aboriginal people on the wrong side of a moral, cosmological divide.

There are reports elsewhere of Aboriginal spirituality being seen in opposition to Christian redemption. Austin Broos (2009, p. 98) reports that for some Arrernte, the interpretation of Christianity includes the concept that *tywerrenge* “Aboriginal sacred objects”, (elsewhere “churinga”) are wicked and un-Christian. “Bloody heathen” is a common insult between one Arrernte person and another. In Wadeye, there is a quite pervasive conceptual opposition between Aboriginal sorcery practices and Christianity. Sorcery is mostly associated with old men, and with bush life before the Mission (cf. McKnight, 2005), while the saving force of Christianity was brought to the community by the Mission founder Father Richard Docherty. Docherty’s redemptive power also saved the people from *ku kanamkek* “the Rainbow Serpent”, who may also be referred to as *ku pangkuy ku warratj* “the devil-snake” (Notes, 2013-01). This may be a somewhat scandalous epithet, since *kanamkek* is at the same time quite central to MP creation stories, ritual and story-telling. Right across northern Australia the Rainbow Serpent is both powerful and dangerous (Elkin, 1930; Merlan, 1998), but it is perhaps only through the cosmological syncretism with missionary Christianity that (s)he can come to be associated with *evil*, requiring some counterbalancing force of goodness and redemption.

One contemporary story tells of how *kanamkek* caused massive flooding and destruction at Daly River and other places, but Wadeye was spared thanks to the blessing of *yile ngala* “the Great Father” Docherty. It is also said that *kanamkek* dwells under the ruins of the old Wadeye Club (once the site of much drunken disorder), whence he lures kigay into solvent and petrol abuse: *temteishen mampurra* “he tempts them” (Notes, 2013-01). In another recent local song, the singer calls upon Saint Mark to save the kigay, who are afflicted with *ngapan wiye* “bad spirits” (Notes, 2013-11).



In these oppositions, traditional Aboriginal supernatural forces are dark powers, while the spiritual forces brought by Christianity offer redemption. This is somewhat reminiscent of the situation reported by Kulick (1992, pp. 59, 160) among the Taiap people of Papua New Guinea, who have assimilated missionary ideology to view themselves as far removed from God, who lives in Belgium. They aspire to speak “English” (actually Tok Pisin) and for their skin to become white so that they may achieve modernity and become close to God. The racialised aspect of the discourse is not so explicit in Wadeye cosmology, though the damnation/redemption opposition has been described to me in terms of “black angels” versus “good angels” (Notes, 2011-08).

Though sorcery is the business of old men, kigay also align themselves with the devil when they embrace heavy metal symbols. Heavy metal music is widely recognized as being associated with *ku karratj* “the devil”, and it is also occasionally linked explicitly to black magic. For example, a middle-aged man was said to be lying very sick in his house, cursed and perhaps dying. He was fixated on a poster of the metal band Manowar (*ku spidi* of his sons) that was hanging on his wall. He could not stop looking at this poster, which was causing the sickness inside him, though all the while he was calling out for help to *kangkarlmawu* “he who dwells above, God” (Notes, 2013-11).

### **3.9 Town culture and bush culture**

Traditional clans and other totemic groups are characterised by their association with places in the landscape and with carefully guarded forms of knowledge that are often associated with those places (§2.6.1). For males at least, membership of such a group entails access to an oral canon of names, stories and ceremonies that are powerful because their knowability is earned and exclusive. But I do not

believe that the metal mobs, the kigay's primary form of social grouping, have any such relation to land or to secret knowledge.<sup>25</sup>

The mobs are associated with loosely defined sections of town that are called *da eriya* "areas" (Figure 3.9.1). I have drawn up schematic maps of the town with various kigay and found general agreement between them in where the areas of various mobs lie, though much discrepancy in the details. The area of some mobs is indicated as a circle around one or two houses; for other mobs the area amounts to a sizeable portion of town space. The area of some mobs sits within, or overlaps with, the area of others – and there is a partial correlation between such geographic overlaps and the overlapping affiliations between mobs (§2.9.1). Graffiti also gives some idea of mob areas around the town – a mob identifier such as FF (Fear Factory) generally appears at a higher concentration in the mob's area, though it may also appear anywhere else around town (Figure 3.9.2).

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<sup>25</sup> I cannot state categorically that such secret knowledge does not exist, because the possibility always remains that it exists but has not been revealed to me. However, I have not had any hint of secret knowledge among the metal mobs, and my intuition is that there is no such thing.



**Figure 3.9.1 Amalgam of Evil (red) and Priest (blue) *eriya* identified by two kigay in October 2011. All three gave different interpretations of Priest *eriya*, while two concurred on the Evil *eriya*. The conceptions of mob *eriya* are somewhat variable, but broadly align.**



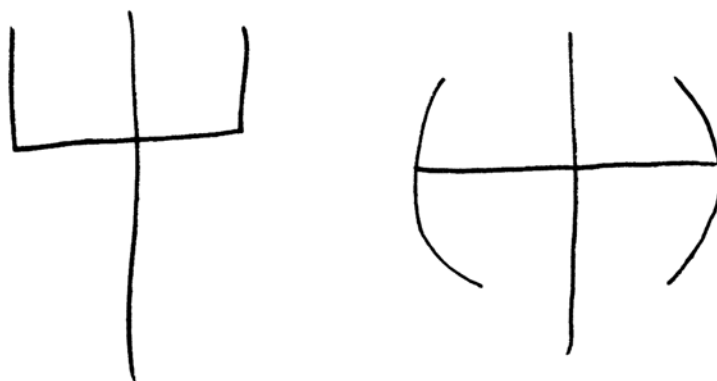
**Figure 3.9.2 Locations of Fear Factory graffiti in October 2011. FF are a Priest-aligned mob.**

Graffiti may also appear outside a mob's area as a form of challenge: in early 2012 there was a substantial fight between Slayer and Evil mobs, fought within the Evil area. A few days after the fight, a new "Slayer" graffito had been painted on the road at the place where the fight happened.

These mob areas have little in common with clan estates. They do not encompass sacred sites, and there are no serious restrictions on who can go where in mob areas – though there can be practical danger for a kigay venturing into the mob area of those with whom he is in conflict. Mob areas do not have an economic role in providing subsistence, though they do clearly relate to residence – the mob area is based on the concentrated residence of affiliates – but this residence is now detached from economic subsistence as a basic function of the switch to urban living, where place of residence no longer follows from hunting and gathering sources. As units of urban space, the mob areas are fundamentally different from landscape places, the latter being more powerful both in economic and in spiritual terms.

As for secret knowledge, the kigay have a rich story-telling repertoire, and some stories are certainly less public than others, but mobs do not seem to "own" stories. There are stories *about* certain mobs – in particular, fight stories that relate the course of a street fight, with great detail about who did what and to whom. And although it took a little while before I was ever told such stories, any secrecy here is because the stories are criminal, rather than because they hold spiritual power. Kigay do also tell stories that involve Dreaming figures, and include strange or miraculous events, which are normally marked in the story-telling by a lowering of the voice, or some demonstration of reluctance to name the figure involved. But such stories reference clan identities, places and totems, not mob identities. In general, while supernatural stories reference clan and land, more profane stories reference mobs, but I have noted a couple of exceptions that are worth mentioning.

I have recorded two stories about the origins of the Evil Warriors mob that describe affiliates or their kin transacting certain powers with *ku karratj* “the devil”. Another story relates both Evil and Priest to a supernatural augury. The story gives details of a well-known fight that occurred in 2002, and resulted in the death of a Priest kigay (for outsiders’ accounts see (Ivory, 2009, p. 318; Toohey, 2008, p. 68)). As both mobs gathered in vast numbers for an arranged fight on Wadeye’s main oval, two symbols representing Evil and Priest appeared in the sky and, according to the storyteller, *kardu terert witnit* “everyone witnessed this” (Notes, 2011-10). He drew the symbols in the sand (Figure 3.9.3).



**Figure 3.9.3 Evil and Priest symbols (left and right respectively). The Evil symbol is from European devil imagery; the Priest symbol is a graphic device used on Judas Priest album covers, and commonly found in Wadeye graffiti (§3.6).**

These stories do appear to show some form of “powerful” or at least supernatural knowledge relating to mob identities; but they are unusual, and not so secret that they could not be told to a whitefella in his first year at Wadeye. Also, they relate only to the Evil and Priest “super-mobs”, not to the more closely-bonded immediate mobs of the story tellers. These stories perhaps show the beginnings of a mythology growing out of mob culture, but not the complex and multi-layered forms of knowledge owned by traditional totemic groups.

My focus on metal mobs should not be misunderstood as an implication that the clan/totem system has been deprecated as a form of social organisation. But its social role is quite distinct from that of the metal mobs, and rather more peripheral than it might have been in the past. While metal mobs are constantly referenced and activated in everyday life, clan identity is only activated on special occasions. For some kigay this would include trips to the clan estate, though there are many kigay who rarely or never make such trips. School events designed to celebrate and maintain 'Culture' (in the most reified sense) inevitably focus on clan identity, but are very sparsely attended by kigay. Initiation ceremonies may be one of the few occasions on which clan and totem takes on an immediate significance for kigay, though as previously mentioned (§2.6.2), I do not know whether initiation has a lasting effect on "everyday life". Another context for clan identification is the funeral, where clan members dress in totemic t-shirts and together make a procession to the burial.

In brief, the contexts in which kigay identify with clan categories are contexts in which a very tradition-oriented, essentialist concept of Culture is active, and this Culture is something that should be revered, but is not often deployed by kigay in their day-to-day interactions. As mentioned above, kigay have grown up in urban space, which is not a space in which residence is intimately connected with sources of subsistence and spiritual power. Without such a connection at work in the everyday, residential world, it is difficult to see how clan identity could be maintained in any way other than as a thing for "special occasions"; rather, it is mob identity that is most active in urban space.

### **3.10 Summary**

This chapter has sought to describe something of kigay's day-to-day lifeworld, focusing especially on their subversive or oppositional attitude to just about everyone else. I am conscious that this portrayal might seem dominated by motifs of "social dysfunction", but it is the topics covered here that appear to me the most salient characteristics of kigay culture.

I have shown in this chapter that kigay have a strong sense of group identity, and are bound by in-group codes and customs. This motivates the study of kigay as a well-defined subgroup within the MP speech community, and therefore the linguistic analysis that constitutes the main part of this thesis. The fact that they are a subversive group and subject to frequent condemnation further suggests that we should expect them to make rich use of in-group social indexing in their language. However, the use of language for subcultural stylistic marking will only be briefly glimpsed in this thesis, because simply describing the range of phonological and morphosyntactic features of their language – and how these variably depart from what has been attested for older people’s Murrinh Patha, is in itself a substantial topic.

This chapter has also given some sense of the conflict, instability and weakness of authority of social institutions at Wadeye. This is important because social context undoubtedly conditions the sociolinguistic structure of a speech community, and through this, is likely to condition processes of language change. Trudgill (2011) argues that languages change more quickly in situations of social upheaval, and further suggests that such changes tend towards simplification of the grammar. In the final chapter I will return to this topic and argue that the linguistic findings in this thesis provide limited support for Trudgill’s position.

## The languages of Wadeye and the language of kardu kigay

### 4.1 Introduction

This chapter describes languages used at Wadeye: which languages, when, where, by and to whom, and in what modalities. I also discuss language attitudes and emic conceptions of language varieties. This chapter also provides a first introduction to Murriny Kardu Kigay (MKK), the language spoken by kardu kigay, and the main focus of this thesis. To some extent MKK is looked down upon by older people as being a “mixed” or “light” language, and the most non-standard forms used by kigay may be pejoratively labelled as Murriny Kura (“water language”), though not all kigay speech is Murriny Kura.

Wadeye is in the late stages of transformation from a richly multilingual community where some half-a-dozen Aboriginal languages are spoken along with English, to a bilingual community in which only Murrinh Patha and English have any substantial usage. Kriol has a marginal presence at Wadeye, though this may be growing. Aboriginal people generally only use spoken English to communicate with whitefellas, however when using mobile phones for text-based participation in social networks, they switch to English, even if the communication is between Murrinh Patha speakers – a phenomenon that I label “digital diglossia”.



## 4.2 Murrinh Patha as lingua franca and as “official language”

Murrinh Patha (MP) has elsewhere been described as the “lingua franca” of Wadeye (Blythe, 2009, p. 26; Walsh, 1990), and this is indeed the case. But further than this, MP can be seen as a sort of “official language”. The site of Wadeye is in the country of the Dimirnin clan, and since MP is the language of the Dimirnin, MP is the proper language for Wadeye (Sutton, 1997).

Virtually all Aboriginal people at Wadeye speak MP as their primary day-to-day language, and for many young people this is their only fluent language (§4.5.1). The main exception are Aboriginal people who have recently married into Wadeye, who of course are not fluent in MP, but quickly begin to acquire the language. I do not know how long this acquisition process takes, but I have observed Aboriginal people who have lived at Wadeye for a few years conversing comfortably in MP. But I have also heard people who I assume to be recent arrivals using Kriol to address MP speakers (§4.5.2).

There is a striking contrast between the successful acquisition of MP among Aboriginal in-migrants, and the almost total non-acquisition of MP among whitefellas. There are only a handful of whitefellas who can speak or understand MP;<sup>26</sup> other medium-term residents (school or clinic workers who stay for a few years) generally learn a few isolated words, while short-term visitors usually do not acquire any MP. The contrast between Aboriginal people and whitefellas is undoubtedly because of their totally different types of social integration in the community, with Aboriginal people entering into kin relationships and Aboriginal households, while whitefellas remain socially segregated in their own sub-community (§2.5.1). But it is perhaps also a testament to Aboriginal peoples’

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<sup>26</sup> In fact I know of exactly two whitefellas, both missionaries, who have achieved relative fluency through adult acquisition (though I believe there have been others among past missionaries); a further two lay whitefellas grew up in Wadeye and acquired MP as children; and there is one interesting case of a long-term resident who has fairly complete passive understanding of MP, and uses a range of vocabulary in his own mixed MP/English speech, but essentially avoids conjugating verbs and therefore does not construct grammatical MP sentences.

disposition to multilingualism, compared to whitefella's expectation that the only language they should need to speak is English (and perhaps an immigrant language of their parents).

#### *4.2.1 Diasporic Murrinh Patha*

An intriguing topic for further research is the linguistic and sociolinguistic nature of Murrinh Patha beyond Wadeye. The extent of this "diasporic" MP is not clear, but there are some speakers at Kununurra (Doug Marmion, *p.c.*), and I have personally observed MP usage among residents at Daly River and in some Darwin "town camps" (i.e. Aboriginal housing estates), including by MP people addressing non-MP people (Notes, 2013-12). MP is also the main language at Palumpa, some 50 kms inland from Wadeye and *not* within traditional MP territory (§4.4). The main questions demanding further research are: how does MP fit into these multilingual environments, and does the MP spoken in these environments show more radical language-contact effects than that spoken at Wadeye?

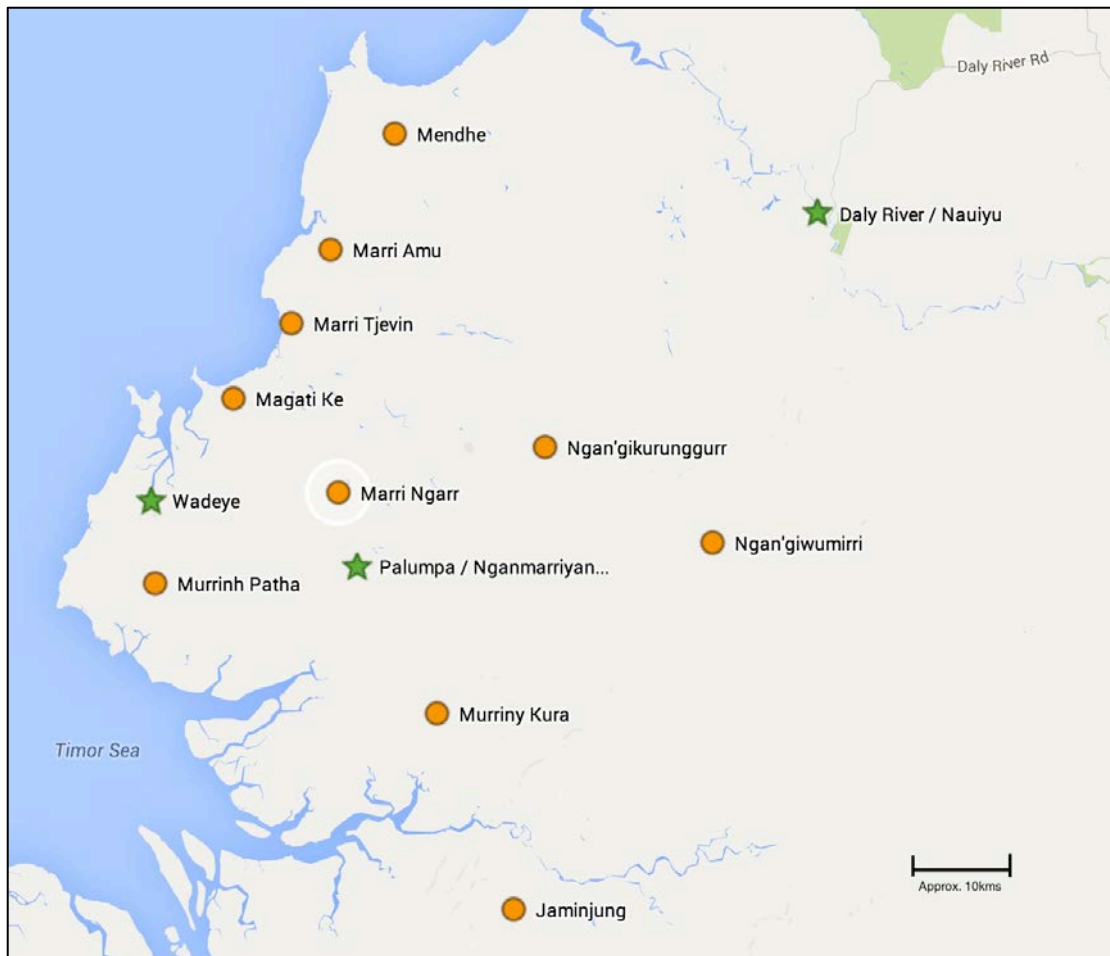
### **4.3 Other Aboriginal languages, and multilingualism**

The language groups represented at Wadeye have already been discussed in §2.3. The language list and map are repeated here, again showing in pairs languages that are in a close dialectal relationship:

	<b>Languages</b>
Core original settlement groups	Murrinh Patha
	Murriny Kura
	Marri Ngarr
	Magati Ke
	Marri Tjevin Marri Amu
More peripheral groups	Jaminjung
	Mendhe
	Ngan'giwumirri
	Ngan'gikurunggurr

**Table 4.3.1 Languages of Wadeye**

To these we might add that there are small numbers of people from other language groups, including but not limited to Tiwi, Marrithiyel and Kriol. However these other languages are not associated with well-established Wadeye clans, lack political representation or “official” status, and are not heard spoken around the town (though Kriol is an occasional exception, see §4.5.3).



**Figure 4.3.1 (= Figure 2.6.2) Green stars are settled towns. Orange circles are approximate indicators of language group residence locations in the Wadeye region (Barwick et al., 2009; Blythe, 2009; Furlan, 2005; Reid, 1990; Ward, 1983)**

Murriny Kura is an obsolete dialect very closely related to MP, and discussed separately in §4.4. The Ngan'gi languages are typologically and genetically very close to MP, though they have substantially different lexicons and are probably not mutually intelligible (Green, 2003). MP people do not seem to recognize any commonality with Ngan'gi languages. The four dialects Marri Ngarr, Magati Ke, Marri Tjevin and Marri Amu all have substantial lexical overlap, are grammatically almost identical, seem to be quite mutually intelligible and are recognized by speakers as being similar (Tryon, 1974, pp. xiii–xiv, Notes 2013–

11). These “Marri languages” (Marett, Barwick, & Ford, 2013, pp. 65–91)<sup>27</sup> are grammatically quite similar to MP, and are its closest geographic neighbours (Figure 4.3.1) though lexical overlap is limited. In fact translation between MP and Marri language sentences is often close to a morpheme-by-morpheme calque, but with very few cognate morphemes. The following are translation equivalents provided by a fully bilingual MP / Marri Tjevin speaker:

(4.3.1) a kani-pirr-a tjuwugina  
 MTj ANIM 3S.STAND-fish-PST yesterday  
*he went fishing yesterday* (CD, 2013-01-15)

(4.3.2) ku kardi-ku-dha kunginire  
 MP ANIM 3S.BE-fish-PST yesterday  
*he went fishing yesterday* (CD, 2013-01-15)

(4.3.3) tha murruka kirringki-vutj karrki-ya  
 MTj THING vehicle 3PC.HANDS-have 3PC.SIT-PST  
*we had a vehicle* (CD, 2013-06-25)

(4.3.4) nantji trak ngume-batj-tha ngardi  
 MP THING vehicle 3PC.HANDS(8).PST-have-PST 3PC.BE.PST  
*we had a vehicle* (CD, 2013-06-25)

This grammatical isomorphism would no doubt make language acquisition easier for speakers of one Daly language learning another, and indeed there was extensive multilingualism among the people before the Mission (Falkenberg, 1962, p. 13). We might also hypothesise that the isomorphism itself is a long-term effect of such multilingualism: the languages of the Daly region bear all the marks of considerable areal diffusion (Dixon, 2002, pp. 674–676).

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<sup>27</sup> Tryon (1974) grouped the Marri languages as the Brinken phylum within his Daly family; however this is superseded by Green (2003: 128) who groups them in the Western Daly subgroup.

Mendhe (Marett et al., 2013, pp. 65–91), while also part of the hypothetical Daly sprachbund, is rather more distant from MP. Jaminjung (Schultze-Berndt, 2000) is from an altogether separate language family on the other side of the Fitzmaurice River, though I have witnessed some evidence of Jaminjung multilingualism in the older generation at Wadeye, many of whom traveled to work on cattle stations in Jaminjung country. Unfortunately little has been documented about the linguistic situation on stations where MP and Jaminjung people worked together, or indeed the degree of Jaminjung bilingualism among MP people of the cattle station generation. However on one occasion Claver Dumoo, an elderly Wadeye man who usually speaks MP or Marri Tjevin, sat in on a recording session I was doing with an elderly Jaminjung speaker. The latter was somewhat frail and struggling to enunciate his words, but to my surprise Dumoo assisted by enunciating, with apparent ease, some of the Jaminjung sentences on his behalf. Dumoo had never mentioned that he spoke any Jaminjung, even though I had explicitly asked him about what languages he knew (Notes, 2013-07-18).

#### *4.3.1 Sociolinguistic status of other languages*

By the time the Mission was fully settled, MP people were a minority of the population, and Marri language groups the majority. An early estimate counts 200 MP people and 500 from Marri and Ngan'gi languages (Falkes, Docherty, & Gsell, 1939). But though the majority of the Wadeye population comes from other Aboriginal language groups, these languages are now moribund. Nor do any of these languages remain vibrant in other locations. Mendhe, Ngan'gi and Jaminjung are all moribund in their homeland communities (Reid & McTaggart, 2008; Schultze-Berndt, 2000, p. 10), while Wadeye was the major place of settlement for Marri people as a whole. Marri Tjevin and Marri Amu both have just one or two full speakers still living in Wadeye; Marri Ngarr has a few full speakers living at Wudipuli outstation some 40km away, but none as far as I

know at Wadeye; Magati Ke has no living full speakers as far as I know; Jaminjung has one or two full speakers living at Wadeye.

The actual usage of these other Aboriginal languages in Wadeye is probably limited to encounters between older Marri or Jaminjung speakers, and one-way usage when they use their own language to address younger kin, who however reply in MP. I do not know how extensively Marri Ngarr might be used at Wudipuli or Palumpa, but I have observed a middle-aged man who normally speaks MP in Wadeye using Marri Ngarr when calling out to his ancestor spirits on a visit to his clan territory (Notes, 2011-07).

The convergence of multiple language groups onto a single language has happened very rapidly at Wadeye. Levels of linguistic competence and people's childhood recollections calibrated against their ages suggest that languages other than MP stopped being fully acquired in the 1950s or 1960s – that is to say, within a decade or so of the Mission being fully settled. An explanation for this rapid language shift can be found in the widespread Aboriginal philosophy of language, where the connection between language and place is axiomatic (Blythe & Brown, 2003; Sutton, 1997). As mentioned in §4.2, there is a consensus that MP is the proper language for Wadeye, so that even though MP people were not the largest population group, their language therefore became the lingua franca of the Mission. Note however that this process has not been automatic in all multilingual settlements; rather, it may be that the group on whose land a settlement was built need a certain minimum of political power or assertiveness to stake the claim of their language. For instance Maningrida (est. 1957) was built on Ndjébbana country, but the speakers of this language lacked sufficient political power in the early settlement to give their language the status of lingua franca (Elwell, 1982, p. 86). Maningrida has instead settled on another language, Burarra, as lingua franca, while at the same time remaining highly multilingual (Margaret Carew, *p.c.* 2014-02-12).

Another possible explanation for rapid language shift might be the dormitories that children stayed in during the Mission days. One of the first acts of the

missionaries was to construct two dormitories, one for boys and one for girls, with school children staying here during the week, and returning to their family camps for weekends and “bush holidays” (Pye, 1972). Though never explicitly stated in these terms at Port Keats, the aim of such dormitories seems to have been to interrupt the socialization patterns of the Aboriginal people, so that they might be partly re-socialised according to the missionaries’ ideas of moral and educational betterment (Choo & McCoy, 2010). But though the Port Keats missionaries were generally supportive of maintaining Aboriginal language (and “culture”, or at least those parts that did not contradict Christianity), their dormitories may have unwittingly also interrupted language socialization. Two middle-aged Marri Ngarr men (BP, b. 1951; SL, b. 1964) have independently told me that they spoke Marri Ngarr as children, but switched to MP when they went to live in the dormitory (Notes, 2011-05, 2013-01).

#### *4.3.2 Conflict among language groups*

The last full Magati Ke speaker (PN, b. 1930s) recounted a fateful event in the decline of his language. One day in the early Mission era, Magati Ke men were sitting in a public area discussing how they were going to arrange an upcoming ceremony. Some MP men accused them of planning something subversive behind the veil of their own language, and a spear fight ensued, in which the MP men were victorious. After this the Magati Ke people decided not to speak their language at the Mission, and from that point on, their children grew up speaking MP (story via Mark Crocombe, *p.c.* 2013-12). One question the story leaves open is, did the Magati Ke men underestimate to what extent the Mission would now be their permanent home? Did they realize that by not speaking their language at the Mission, they were consigning their language to terminal decline?

There have been other, deeper conflicts between clan and language groups at Wadeye. One Marri Ngarr clan was in chronic conflict with various MP, Marri Tjevin and Marri Amu groups during Mission era (Notes, 2011-07, DP 2012-06-20\_25); more recently there has been a long-simmering conflict between another



Marri Ngarr clan and a Marri Tjevin clan. Since Marri Ngarr are inland, freshwater people, and the clans with which they have fought are coastal, the long-term enmities in Wadeye are sometimes characterised by Aboriginal people as saltwater versus freshwater conflict. However this is a radically simplified and generalized analysis, and all fights that have been recounted to me in any detail seem much more complicated in the structure of their alliances.

The more recent alignment of conflict based on metal mobs, especially mobs allied around the poles of Evil Warriors and Judas Priest (§2.7), may be historically based on the older conflicts structured around clan and language groups. Aboriginal people in Wadeye will often explain Evil and Priest groups in terms of clan and language groups: Evil is the saltwater mob (MP and perhaps other coastal clans), Priest is freshwater (primarily Marri Ngarr). This analysis is taken up by various whitefella residents in Wadeye, and resonates with the “ancient tribal conflict” trope of many media reports (e.g. Toohey, 2004); but the connection between mobs and traditional social categories is in fact rather loose. My survey of mob affiliation shows that both Evil and Priest, and many of the smaller mobs I have investigated, have affiliates with highly varied clan and language associations (§2.7). The Priest → Marri Ngarr, Evil → MP equation holds true as a rough overall tendency, but not as a rule. The coastal Marri peoples seem to shift alliances somewhat between these two poles: for example, the Big T mob, which is dominated by Magati Ke and Marri Amu kigay, has in recent years shifted alliance from Evil to Priest, and back to Evil again (Notes, 2011-10, 2013-01, 2013-06).

We will see in the linguistic sections of this thesis that Marri language heritage is an influential factor for some sociophonetic variables, and may also influence morphosyntactic variables in MKK, though the latter requires further data to confirm or disconfirm. On the other hand, Evil/Priest affiliation does not seem to correlate to sociolinguistic variables. I will argue that this is because mob affiliations have too much overlap and flexibility to be indexed to different ways of speaking, whereas Marri language heritage is both more permanent, and more directly linked to language contact.

### 4.3.3 “One people, one language”

The counter-balance to the history of conflict described above is the extensive social intermingling and inter-marriage of all Aboriginal groups at Wadeye, and in particular the kinship ties that allow any individual to relate to any other individual within a very few steps of recognised relatedness. A certain discourse, presumably growing out of these links, centres on statements of unity. The wording in official council or public business is usually something like *kardu numida, murriny numida* “one people, one language”; but in informal kigay discourse I have recorded it as *wan darrikardu, wan femili, wan lengwitj thanamngerrenngime* “one people, one family, we speak one language” (MAK, 2013-07-11\_02). But such statements may be made alongside others that draw attention to the differences between various clan groups in Wadeye, so that rather than simple assertions of unity, they must instead be seen as assertions of *unity underlying difference*. The following statement was made for a video recording by a Marri-heritage kigay, sitting together with another Marri kigay – both of whom affiliate to Evil:

*Kardu kanyi thumemluluruy-thanam kardu da wan len thanamnime.  
Kardu wan Murrinh Patha thanamngerrennime da purtek karrim kanyi.  
Neki-gathu-ka rispek pumarrabatj pi. Purtkit kanyi-yu, da komuniti ngalla  
kanyi-yu. [...] Neki-ka da manangka da-wa kanyi-yu. Da ngathayida  
tjirrampunmawu Murrinh Patha-mup-nu.*

The people here are always in conflict, (but) we're of the same country. We all speak the same language in this country. This is the Murrinh Patha peoples' place, the two of us respect them. All of us have respect here in Port Keats, the whole community. [...] This country isn't the country of us two. We're just outsiders living here with the Murrinh Patha people. (JL, 2013-06-22\_02)

These two kigay are of Marri heritage, but since they affiliate as Evil, they both have strong social connections to MP kigay. It is unclear whether a similar statement of “respect” and shared language would be spontaneously made by Marri-heritage kigay aligned to Priest.

#### **4.4 Murriny Kura old and new**

Murriny Kura (lit. “water language” or “fresh-water language”) is a label applied to a traditional dialect associated with a handful of clans whose land is somewhat further from Wadeye than the MP clans. But the label is also applied to contemporary forms of MP speech that are derided for their impurity. The term clearly has pejorative implications, at least among speakers who identify their own speech as MP, and it also seems linked to peoples’ perceived legitimacy in residing at Wadeye.

During the Mission era from the 1950s to the 1970s, speakers reported that there were two dialects, Murrinh Patha proper, and Murriny Kura (Falkenberg, 1962, p. 13; Walsh, 1976, pp. 4–6).<sup>28</sup> The former was identified with coastal clans, including the Dimirnin people on whose country Wadeye was built, while the latter was identified with clans to the south-east stretching from the coast along the northern bank of the Fitzmaurice River (Mark Harvey, Joe Blythe, *p.c.*, see Figure 4.3.1). These clans still usually identify themselves as Murriny Kura people, though not consistently so (§2.3), but when I have sought out elderly clan members to elicit samples of the Murriny Kura dialect, all speakers at Wadeye have told me that they speak only Murrinh Patha. On the other hand, various people at the small community of Palumpa some 50kms inland *do* identify their own speech as Murriny Kura, though it is not clear if they are associated with the Murriny Kura territory on the north bank of the Fitzmaurice.

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<sup>28</sup> In addition Walsh reports that Murriny Dimirnin is a distinct dialect spoken by the Dimirnin clan; however in more recent years there has been no attested reference to such a language variety (Blythe, 2009, p. 31).

Unfortunately not much of the traditional Murriny Kura dialect has been documented, but from archival materials and elicitation with speakers at Palumpa I have identified some minor differences. The clearest differences I have detected are an extra first syllable on the front of first-person-inclusive verb classifier forms (MK *ngampurru-nu-nime* vs MP *purru-nu-nime* “let’s go”, MK *nganthanam-kut-nime* vs MP *thanam-kut-nime* “we collected it”), and the use of a demonstrative *ngangka*, which seems to be MK only. One Palumpa speaker I recorded also gave some lexical items that are identical to attested Marri Ngarr, rather than MP vocabulary. But it is not clear whether this shows that traditional Murriny Kura has more lexical overlap with Marri Ngarr, or if this is a recent contact effect (RW, SL, 2012-06-02, 2012-06-22, 2012-07-11, 2013-07-06).

Walsh (1976: 5) was told that Murriny Kura is a “heavy” dialect, which, given the other attested meanings of “heavy language” (§4.7.7), may be because it was already in the 1970s an archaic variety falling out of use. Falkenberg (1962: 13) was told that Murriny Kura is “soft”, which he claims is the reason for its being named literally as “water language”; but Walsh (p. 4) proposes the alternative or additional explanation that it is *kura*, i.e. *fresh* water, not seawater, because of its association with inland, riverine clans. There is some support for the latter view in that the language of one clan may be labelled either Murriny Kura or Murriny Kura Tjipmam “dark water language”, and in this case the reference is unmistakably to the silt-laden river water that flows into the sea at a site in their country (Mark Crocombe, *p.c.*). If this label is based on a geographic water feature, then it is likely that the Murriny Kura label in general references fresh-water clan territory.<sup>29</sup>

These days people at Wadeye talk about Murriny Kura more often as a label for language spoken at Palumpa, as a label for MP spoken by Marri language people who have settled at Wadeye, or for the most non-standard type of speech produced by young people. Confusingly, it may now be described as a “light”

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<sup>29</sup> Barwick (*p.c.* 2014-05) mentions that Murriny Kura may refer to Ngan’gikurunggurr, though I have not found any further support for this view.

language, but there does seem to be some coherence in using the Kura label for both Palumpa speech and Wadeye speech by Marri-heritage people, as both are groups who speak MP, but do not by heredity “own” MP. It is not clear whether this logic extends to the traditional Kura clan dialect, though perhaps this may also be explained in terms of perceived “mixing”, i.e. language contact. But it is also possible that the fresh water association remains a factor in determining the Kura label, since Palumpa is inland and is indeed built beside a fresh-water lagoon. In fact the location of Palumpa is somewhat interstitial, being approximately at the intersection of territories associated with Murriny Kura, Marri Ngarr and Ngan’giwumirri languages, and its clan/language associations are somewhat contentious (Barwick, *p.c.* 2014-05)

As for claims that Murriny Kura is spoken at Wadeye by Marri-heritage people (who come from both fresh-water and coastal country), these have a pejorative tone, but are not always rejected by the speakers indicated. Most people in Wadeye from all clan groups identify their speech as “Murrinh Patha”, but a couple of men from Marri Ngarr clans, young enough that their only Aboriginal language is MP, have spontaneously told me that what they speak is really Murriny Kura (Notes, 2012-01, 2013-06). However these speakers do not use the “traditional Murriny Kura” features such as the different verb classifier form identified above.

As mentioned above, the linguistic section of this thesis shows some correlations between innovations in kigay’s speech and Marri language heritage. Given that Murriny Kura is used as a label for “incorrect” MP, we may therefore hypothesise that the most non-standard form of MP spoken by kigay might be largely co-extensive with what is now labelled Murriny Kura. The linguistic focus of this thesis might therefore have been labelled as “Murriny Kura”, rather than MKK, except that the type of speech described is not just the most divergent examples, but speech of kigay in general. The other reason why I have hesitated to label the speech described in this thesis as “Murriny Kura” is that further research is required to establish which linguistic features Wadeye people associate with this label. I have done a small amount of perceptual testing asking native speakers to

label speech samples as either Murriny Kura or Murrinh Patha, as well as *yittjit* “heavy” or *parndurtparn* “light” (§4.8.3). However the politically delicate nature of the Murrinh Patha / Murriny Kura distinction creates methodological problems, and the number of participants tested is not yet sufficient to draw conclusions from this data.

#### **4.5 English and Kriol**

In this section I describe the role of English at Wadeye, and the more limited role of the northern Australian English-lexified creole, which is labelled “Pidgin English” by people at Wadeye, but as “Kriol” in the linguistic literature (Sandefur, 1986; Munro, 2000). I focus especially on the quite limited exposure that kigay have to English.

This section deals only with direct spoken English, and not to English via mass media, which is discussed in §4.6.

##### *4.5.1 English exposure and competence*

There is a wide range of English competence among the Aboriginal population of Wadeye, but in general people over the age of about 40 have a much greater command of English, and among young people women have a greater command than men. In other words, kigay, along with young children, are the demographic with the least command of English. Not surprisingly there are a few kigay who are quite fluent in English, but it is more common to have a partial grasp of the language, understanding simple statements and questions but not fluent native conversation, and lacking confidence in speech. There are also some kigay who I have never known to speak more than isolated words of English, despite considerable time spent in their presence.

Naturally, low levels of competence and confidence in English reflect limited exposure to the language. This is inextricably linked to the institutional “disengagement” and hostility to whitefellas described in Chapter 3. Kigay speak

limited English because they have not spent much time at school or in other English-speaking, whitefella-controlled environments. By contrast, older people who grew up in the Mission era attended school regularly, and acquired English fluency. Lack of English competence discourages kigay from engaging in whitefella institutions, thus creating a vicious circle of disempowerment and alienation. In many other parts of Australia, and the world as a whole, indigenous communities are switching to cosmopolitan languages, often as a result of forced or voluntary engagement with speakers of those languages (Crystal, 2000; Grenoble & Whaley, 1998). To some extent Wadeye's very disengagement from wider Australian networks can be seen as a factor preserving the vitality of the Murrinh Patha language – though this should not be misunderstood as an implication that communities cannot engage in broad social networks without losing their language.

For the many kigay whose participation in school and work is only fleeting, the main sources of their English exposure must be other, non-institutional contexts. One such context is the counter of the shop or take-away in Wadeye, which are both predominantly staffed by whitefellas. However this involves a fairly limited range of linguistic interactions, and in my observation kigay perform these transactions with an absolute minimum of speech. More substantial exposure to English, as well as specifically Aboriginal English and Kriol, occurs on travel outside of Wadeye. Again, most kigay have quite limited participation in this activity compared to other segments of the population, though the exceptional case is prison.

#### *4.5.2 Prison and language contact*

Given kigay's very high level of incarceration (§3.7.1), and lack of participation in other institutional environments, prison is a major source of language contact for them. At Berrimah prison kigay encounter Aboriginal people from across the Top End, especially other large "remote communities" such as Maningrida and Groote Eylandt, with whom they report forming friendly relations. One kigay also

mentioned to me that there are *ret teset-mup* “red desert people” such as Warlpiri, expressing fear of these people as potential sorcerers (DP, 2011-09-01). However even in prison kigay may socialize primarily with MP speakers, of whom there are always sufficient numbers in custody to create their own clique, encouraged by the fact that they are allocated to cells together (Notes, 2013-12).

Kigay report that the language they use with other Aboriginal inmates is “English”, though it is not clear where this might fit on the spectrum from Aboriginal English to Kriol. Systematic research would be required to establish exactly how much language acquisition kigay gain from incarceration, but one kigay (CM, aged 21) I spent time with before and after a visit to Berrimah spoke noticeably more English on his return (Notes, 2012-06).

#### *4.5.3 Kriol*

It has previously been reported that Kriol is “by and large ... absent” at Wadeye (Blythe 2009: 30), but it does in fact have some peripheral presence. I occasionally hear Kriol being spoken between people in the street or being shouted loudly from inside a house, and I know some Wadeye Aboriginal people who claim that they do not speak MP but only “Pidgin English” (Notes, 2011-06, 2012-06, 2013-01). MP people also use some Kriol elements in their social media interactions (§4.6.3).

There is substantial mobility of people between Wadeye and Peppiminarti, Daly River, Emu Point, and other small communities inland (see also §2.5). Aboriginal people from all these places are likely to speak Kriol, and communicate with Wadeye MP speakers using various mixtures of English, Kriol and MP. During the dry season “bush holidays” of June and July, when roads are at their most passable, there are noticeably more Kriol speakers, especially children, visiting kin in Wadeye. But there are also permanent or semi-permanent Kriol-speaking residents who have married in to Wadeye families. One such in-married Kriol speaker, from the small community of Wurdurduk, tells me that Wadeye people



understand his Kriol “a bit” (Notes, 2013-06). A kigay I know whose first language is MP and lives in the same household tells me that “some people” in the house speak incorrect MP, and that he laughs at them or sometimes corrects them – which has led to some conflict within the house (Notes, 2013-06). Interestingly, it is this same kigay who notably mixes a Kriol construction into his MP in one of the natural speech recordings (§4.7.5).

#### **4.6 Language in media, and “digital diglossia”**

The previous sections in this chapter deal with spoken language, in which modality MP has overwhelming dominance among Aboriginal people at Wadeye. But when we turn to other modalities of linguistic communication the situation is quite different. In mobile digital media there is a most notable switch into English, which I label “digital diglossia”. This switch is probably related to literacy: kigay have some limited literacy in English, though this might be characterised as “digital literacy” related to mobile phone use. Most kigay are not able to read or write printed extensive running text in English, and do not have any literacy at all in MP.

In recorded music MP shares dominance with English-language music (in which the words are often indistinct anyway), and on television (including DVDs) English dominates. Digital mobile-phone based media is also dominated by English, and is quickly becoming a core part of everyday life (§3.5). On the other hand, the printed word remains highly peripheral. I discuss the use of language in each of these non-spoken modalities in turn.

##### *4.6.1 Language in music*

Wadeye has a very active local culture of recorded music, all of which is sung in MP by men and women of all ages. Most songs are about landscape places, totems and ancestors, and are accompanied by relaxed country-rock instrumentation produced on digital keyboards (Barwick, forthcoming; Furlan,

2005). In recent years video clips are also made to go with some songs (an excellent example is “Yederr by Wakal Bengkunh”<sup>30</sup>), and as described in §3.2 and §3.5, new styles of music and lyrical subject matter may now be emerging. Songs are also performed live at various parties or “disco nights”, which are predominately attended by MP speakers.

Recorded music from the outside world is also very popular in Wadeye, and this is generally in English. Heavy metal is the most socially significant genre (§2.7), but lighter pop styles are also popular, and in earlier decades country music singers such as Slim Dusty were very popular (Furlan, 2005, pp. 217–8).

#### *4.6.2 Television and DVD*

Television and DVDs are often viewed at Wadeye, but rather less so than I had expected, given that many people have large amounts of “free time”. It is not unusual for houses to be without a television set, or for the set to be switched off. The content is mostly Australian national channels, including an Indigenous oriented channel, with all channels generally broadcasting English language programs. There is also one channel dedicated to local content, which broadcasts the content of a DVD loop (cf. Michaels, 1986; Molnar & Meadows, 2001). The local channel is only sporadically utilized, but generally broadcasts MP content and sometimes includes very popular local productions, such as the music videos mentioned in the previous section.

I have noticed that the DVD and national broadcast content that people watch in their homes generally belongs to genres that do not require high levels of English comprehension (Notes, 2011-08). The content that I observed people watching includes Australian Rules football games, action movies, children’s animated programs, and nature documentaries showing animals in their habitat. Similar observations have been made in other remote Aboriginal communities, such as

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<sup>30</sup> A web search of this term will provide the YouTube link (Goodfellow, 2012).

Areyonga (Langlois, 2004, p. 11). I have watched part of an action movie together with some kigay, and at various points asked them about the plot. They gave a highly simplified version of the plot, confirming my impression that kigay do not understand English-language movie dialogue (Notes, 2013-06; cf. Michaels, 1988).

The type of television viewing I have observed at Wadeye provides counter-evidence for hypotheses that dominant-language television broadcasting is a major agent in language shift and language death (Krauss, 1992; Michaels, 1986; Schmidt, 1985, p. 19). Kigay watch a substantial amount of English-language television, but they are not shifting to English. The linguistic element of the broadcast seems quite peripheral to their viewing – though it is possible that the large uptake of English lexical items in kigays’ speech (§4.7.2) is somehow encouraged by television viewing. However, as for actual language shift, television broadcasting may have a very limited linguistic impact if viewers’ acquisition of English is not already grounded in spoken interaction.<sup>31</sup>

#### *4.6.3 Mobile digital media*

For young people in Wadeye, the range of digital media available on mobile phones is now the most significant non-spoken media modality for linguistic interaction (see also §3.5). Mobile phones are of course used for speaking (in MP), but also for the following media/communication practices, all in English: text messages, social networks (DivaChat and Facebook), checking football scores, and the exchange of photos, video and recorded music.

Text messages are not used frequently by kigay, most of whom do not have sufficient literacy for the medium. I have been asked on a couple of occasions by kigay to help them read romantic or at least sexual messages they have received

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<sup>31</sup> On the other hand, there is some equivocal evidence for English acquisition via television among Dutch children (Koolstra & Beentjes, 1999), and the diffusion of English sociolinguistic variants via television (Stuart-Smith, Pryce, Timmins, & Gunter, 2013; Sayers, 2014).

from young women (Notes, 2011-09). In general kigay don't send text messages, though young women evidently do so to some extent. Kigay can usually write their *ku spidi* affiliations (§3.5), but in many cases cannot write their given names or any other words. On the other hand, kigay clearly do deploy some functionally specific literacy in being able to read menu options and file names; though this is not a "productive" literacy that facilitates writing or reading sentences (cf Kral, 2010).

The content of text messages I have seen, as well as the writing used on social networks, is written in a basilectal Aboriginal English, using numerous textese orthographies and other idiosyncratic spellings. The following Facebook exchanges are typical (see also example in §3.8.1):

[Caption to photograph posted]

MP: Me end my brother

[Comments on photograph]

MP: I was to shame to dance but all the RANKU E boys told me to dance.

GK: Love this photo of my to cousins 😊

FVD: Speedy na my bossy

(2014-01-17, Author's Facebook feed)

[Wall post from Wadeye resident to a Tiwi islands resident]

MP: Wat u up 2 bossy

FVD: Watching movies on austar boring ways, what u up to bossy.

MP: true bossy

MP: just seting down whit my family

FVD: Oh yeah what's happening there, I bin try go turtle yesterday but nothing bala, I'll try go tomorrow.

(2014-01-21, Author's Facebook feed)

Note that the participants in this exchange are from Wadeye and the Tiwi islands, and are communicating at a distance. At the end of the first exchange,

one of the Tiwi participants uses the Wadeye-based familiar address term “speedy” (i.e. *ku spidi*) as well as the more widespread “bossy”; in the last comment of the second exchange, he uses the Kriol function words *bin* (past) and *bala* (abbr. *bobala*, “poor me”).

The topic of social media use in remote Aboriginal communities is a fascinating one, and too extensive to deal with thoroughly here, but I offer a brief summary. Young people at Wadeye have for some years been using DivaChat (Rawlinson, 2012), a somewhat idiosyncratic network available on Telstra mobile phones, but seemingly limited in its uptake to Aboriginal people of northern and central Australia. Since about 2012, largely due to the appearance of cheap smartphones (with larger screens) at the Wadeye shop, Facebook is gaining increasing traction, and may soon take over from DivaChat.

The use of social network applications in remote Aboriginal Australia has some distinctive features. Kinship is constantly affirmed and re-affirmed; and for Wadeye people, metal mob affiliations are also frequently evoked (Figure 4.7.1). Interpersonal conflicts and jealousies are often played out publicly on social media, which can therefore have a role in fomenting violent confrontations. But perhaps the most interesting feature of the medium is that Wadeye people switch on social media from their normal daily language, MP, to English, a language in which many of them are only partially competent. The only MP words I have seen on Facebook or DivaChat are kin terms (perhaps because these do not translate well, or perhaps because of affective value).



**Figure 4.7.1** Image posted to DivaChat, accessed 26 November 2011

“Diglossia” is the common sociolinguistic term for a situation where a speech community uses one language in some contexts, and another language in others (Ferguson, 1959). A classic example is the Arab world, where local dialects are used for everyday conversation, but the quite distinct Standard Arabic is used in various official contexts. For the situation in Wadeye, where a distinct language is used just in the digital/social media network, I propose the term “digital diglossia”. One possible explanation for the emergence of this diglossia is that media users’ level of literacy is simply higher in English, even though their primary spoken language is MP. A second possible reason is that they may see English as a more appropriate language to the digital realm, where most other content they encounter is in English. A third reason is that social media communications (or at least public “wall posts” and “status updates” I have viewed) are public, and may be viewed by an expanding Aboriginal kin network distributed across places such as Daly River, Darwin and Tiwi Islands. This might motivate linguistic accommodation to the entire network, for which Aboriginal English and Kriol are the candidate languages.

#### *4.6.4 Print media*

Print media is not extensively used by Aboriginal people in Wadeye outside of the school and the church, unless we include the prolific use of graffiti under this rubric (see §3.6). A few older people read Darwin newspapers or globally distributed comics that are available at the store; and of course, a certain amount of official mail is received, in English, which for many people requires assistance from someone with greater literacy.

A fairly substantial body of educational and religious material in MP has been produced over the years at the Literacy Production Centre attached to the school. More recently books in other local Aboriginal languages have been added to the collection. However I have not observed how these are deployed in the classroom, and I have never seen these materials being read by anyone outside

of the school. I have seen printed songsheets of hymns used in the church, which is closely associated with the school. Outside of these institutions, the only use of MP print media I have observed is the writing down of MP secular song lyrics so that they can be correctly remembered for a recording session.

#### **4.7 Murriny Kardu Kigay**

Across northern and central Australia, dozens of Aboriginal languages are becoming moribund as young people grow up speaking Kriol or English, but MP is among the handful that continue to be learnt by children as L1.<sup>32</sup> MP as spoken by contemporary young people is certainly not identical to the language as it was spoken at the founding of the Mission, but the language of young people is still confidently identified by both young and old as “Murrinh Patha”. The speech of young people in general is not considered to be a separate language or language variety, though some types of youth speech can be labelled “Murriny Kura”, as described in §4.4. The linguistic subject matter of this thesis, which deals with kigay speech both careful and vernacular, is therefore not an emically recognized language variety, but rather a synchronic slice of language defined for the purposes of this research. I call this Murriny Kardu Kigay (MKK), i.e. “the language of young men” for the convenience of having a label. MKK is not a “natural” language variety, but an arbitrarily defined research scope: MP as spoken by kigay at the time of my fieldwork (2011–2013).

Throughout this thesis I contrast MKK to “Standard Murrinh Patha” (SMP), which is again a construct of my research. I use this label to refer to MP as spoken by people of MP clans who grew up before or during the early days of the Mission. This language is represented in various archival recordings by Street, Walsh, Butcher and Blythe, and is the source material for most previous grammatical

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<sup>32</sup> Other languages still spoken by children include Yolngu varieties, Kunwinjku, Burarra, Wik Mungkan, Anindilyakwa, Western Desert varieties, Arrernte varieties and Kala Lagaw Ya (Evans, 2007; Walsh, 2007).

descriptions of MP.<sup>33</sup> MP does not have the didactic and codifying apparatus of a national language that would normally be referred to as having a “standard” variety – in particular, it lacks a strong literary culture – but it does have the mechanisms of standardization in rudimentary form, in the use of SMP as a language of instruction at the school, and the translation of sections of the Bible into SMP (§4.7.4).

The grammar of MKK does not diverge radically from SMP, but there are some subtle morphological differences, and very occasional insertions of English/Kriol grammatical structures. On the other hand, there is massive lexical borrowing from English/Kriol. This thesis does not by any means present a complete account of differences between MKK and SMP, but instead focuses on a few areas in which I have identified clear and salient distinctions, most notably:

- Use of English/Kriol-derived lexicon, which is variably integrated into MP phonology (Chapter 6);
- Lenited pronunciation of /p/ and /k/ phonemes in syllable onsets (Chapter 7);
- Phrasal verb constructions used instead of the polysynthetic verb (Chapter 9);
- Reordering, and variable absence, of inflectional morphology in the polysynthetic verb (Chapter 10);
- Merging of morphological tense-aspect categories (Chapter 11).

In the following sections I give an overview of MKK in comparison to SMP. Where a topic is covered in this thesis I refer the reader to that section, but for some other topics not covered in detail I instead give a brief account here.

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<sup>33</sup> Various grammatical descriptions by Nordlinger and collaborators are a partial exception, since Nordlinger’s data is drawn from a mixture of SMP speakers and a middle-aged female speaker of Marri Ngarr heritage. However the latter speaker does not seem to depart substantially from SMP grammar.



#### 4.7.1 Lexicon

Lexicon is the most significant distinction between MKK and SMP, with MKK using large numbers of English/Kriol borrowings. This appears to be the most socially salient distinction between SMP and MKK (§4.8, §12.5.1). It is worth noting that while there are very substantial lexical borrowings from English/Kriol, MKK exhibits no borrowings whatsoever from Marri languages or other languages that contributed major proportions of the Mission population, apart from some kin term borrowings (§2.6). In the Discussion chapter I will argue that this provides further evidence for the social salience of lexicon, and a fairly strict ideological constraint against using traditional languages outside of their geographic territories (§12.5.6).

In Chapter 6 I describe the scale and scope of this borrowing (around 20% of content words in natural discourse), with a particular focus on the assimilation or non-assimilation of phonological material in borrowed words. But as an immediate introduction to MKK I illustrate here a glossed fragment of collaborative narrative told by two kigay. They recount the killing of Japanese fishermen by an MP man Nemarluk (based on actual historical events, novelised by Idriess [1941]). English-sourced vocabulary is indicated with bold font:

WL: Ngarntimeli      pubem-ka-ngkabu-nime  
[NAME]              3PL.15-PC-rush-PC.MASC

tjandu      pangu=kathu      purne-dha-nime.  
boat      DISTAL=ORIG      3PC.go(6).PST-PST-PC.MASC

*At Ngarntimeli, they (the Japanese) rushed out of their boat.*

**Raitwei**-matha **idim** dam-purra-mut-nime              tju      litjpurr-re.  
**complete**-EMPH **hit**      3S.POKE(19)-3SIO-give-3PC.M      WEAP axe-INSTR

*He (Nemarluk) went right through them with an axe.*

**Snaipa**=matha wurrini-purra-nime-dha nawa.

sniper=EMPH 3s.go(6).PST-3PL.IO-PC.MASC-PST TAG

*He snuck up on them, eh?*

Matha ngalantharr **kru** nukunu purne-winharart-tha-nime

EMPH old.man gang 3S 3PC.GO(6).PST-run-PST-PC.MASC

pangu-re mam-purra-nime.

DISTAL-PERL 3s.do(34)-3PL.IO-PC.MASC

*The old man's (Nemarluk's) gang came running out, they surrounded them.*

PP: Thamul damatha penime dam-ngkardu=tjim?

spear just 3PC.MASC 2s.13-see=SIT(1).SER

*They just had spears, you see?*

WL: Matha ku **waitpela** ini=yu pumem-ka-yimpurr-nime

EMPH ANIM whitefella ANAPH=TAG 3PL.DO.RR(10)-PC-fall.down-PC.MASC

ku tjepinis=yu

ANIM Japanese=TAG

*Those whitefellas, those Japanese were all knocked down.*

Pumem-ka-yimpurr-nime nukunu pelpitj DAT!

3PL.DO.RR(10)-PC-fall.down-PC.MASC 3S HEAD chop!

*They all fell down, beheaded.*

PP: Penime=ka thungku **tjiding** dam-ngkardu thungku

3pc.masc=top FIRE cheat 2s.13-see FIRE

penime thamul litjpur

3PC.MASC spear axe

*They unfairly had guns you see, the other mob had spears and axes.*

(PP/WL, 2012-06-02)

This is very clearly “Murrinh Patha”, with MP polysynthetic verbs expressing all arguments at the core of every clause. But most clauses also have English lexical

borrowings. A borrowing like *tjepinis* “Japanese” is fairly inevitable, but all the others are what I will call “gratuitous” borrowings (§6.3.1) – those where indigenous MP vocabulary could have been used to express the same meaning.

The borrowing of nouns and adjectives has no major grammatical consequences in MKK: these are usually integrated into typical MP noun phrases (with occasional exceptions, §4.7.4), and host the same types of morphology as indigenous nouns. Noun classifiers optionally precede them (exx.4.7.1–2) and more rarely, suffixes are applied for case marking (4.3.3–4):

- |         |  |  |                    |
|---------|--|--|--------------------|
| (4.7.1) | nantji pun                                   | THING spoon                            | “spoon”            |
| (4.7.2) | nantji waitpela stap                         | THING whitefella stuff                 | “whitefella stuff” |
| (4.7.3) | trak-re                                      | vehicle-INSTR                          | “by car”           |
| (4.7.4) | ngarra rut tjutkat                           | <b>mindilbitj</b> <sup>34</sup> -wangu |                    |
|         | LOC road shortcut                            | cemetery-DIR                           |                    |
|         | <i>on that shortcut road to the cemetery</i> |  | (DP, 2012-07-05)   |

Of the ten noun classifiers featuring in SMP, eight are lexically productive in the sense that they classify some borrowed noun (Table 4.7.1). The exceptions to this are *kardu*, used for socially recognised persons in MP, which has no borrowed nouns, and *thamul*, used to classify types of spear in SMP, which does not classify any borrowed nouns, and furthermore has ceased to function as a classifier in MKK, with its semantic range now subsumed by *tju* (weapons).

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<sup>34</sup> *Mindilbitj* “cemetery” is borrowed from Mindil Beach, the location of a cemetery in Darwin.

<i>Classifier</i>	<i>Interlinear gloss</i>	Semantic range: <i>Examples of borrowings</i>
da	PLACE, TIME	Places and periods of time: <i>da Dawun</i> (< Darwin), <i>da tjaba</i> (< supper) “evening”
kardu	PERS	Socially recognised (usually Aboriginal) people: <i>no borrowings</i>
ku	ANIM	Animals, meat, body parts, spirit beings, outsiders: <i>ku watjella</i> (whitefalla), <i>ku mani</i> (< money), <i>ku spidi</i> (< speed-metal, see §2.7)
kura	WATER	Water and water-based liquids: <i>kura biya</i> (< beer), <i>kura kodiye</i> (< cordial), <i>kura terek</i> (< Tarax soft-drink brand) “soft drink”
mi	VEG	Consumable plant matter: <i>mi beka</i> (< tobacco), <i>mi kantje</i> (< ganja), <i>mi winfilt</i> (< Winfield cigarette brand) “ready-rolled cigarette”
murriny	LANG	Languages, names, stories, songs: <i>murriny stori</i> (< story), <i>murriny tjung</i> (< song)
nantji	THING	Miscellaneous inanimate objects: <i>nantji sidi</i> (< CD), <i>nantji inernet</i> (< internet) “computer”, <i>nantji trak</i> (< truck) “motor vehicle”, <i>nantji tjingelet</i> (< singlet) t-shirt
thungku	FIRE	Fire, firearms and electricity: <i>thungku lait</i> (< light) “electric light”, <i>thungku laida</i> (< lighter), <i>thungku raiful</i> (< rifle), <i>thungku gridi</i> (< greedy) “shotgun”
tju	WEAP	Weapons: <i>tju ayan</i> (< iron) “iron rod”, <i>tju eks</i> (< axe), <i>tju bailen</i> (< violence), <i>tju kart</i> (< cards) “playing cards”
thamul	SPEAR	Types of spear: No longer a noun classifier. E.g. <b>tju thamul</b> “spear” (JL, PSE)

**Table 4.7.1 Borrowing into MP noun classes**

The borrowing of verbs, however, *does* have grammatical consequences. The MP polysynthetic verb does not productively incorporate new roots, so English verb roots are instead borrowed using a phrasal structure with an uninflecting verb root followed by an inflecting light verb:

(4.7.5)    **meikit**                    **mam**                    ngamimarda=thu  
(MKK)    make.it                    3S.DO(34)            other.side=HITHER  
          *he made it all the way across*                    (LP, 2011-07-25\_2-6)

The use of phrasal verbs (i.e. uninflecting verb root combined with inflected light verb) is also becoming more extensive with indigenous verb roots, leading to a quantitative decrease in the synthetic character of MP verbs. This is the subject of Chapter 9.

#### 4.7.2 Obsolescent morphology

There are other minor ways in which synthetic verbal morphology is being reduced. One instance of this is incorporation of adverbial morphemes as “endoclitics” in the verb, which was found to occur in 22% of verbs in an SMP corpus (Forshaw, Nordlinger, & Blythe, 2012), but in MKK is unattested. In MKK such adverbials appear instead as enclitics (§10.4.1):

(4.7.6)    nantji-re    da-wangu            mam-wunku-makat-**warda**-nintha  
(SMP)    THING-ERG    PLACE-DIR            3S.DO(8)-3PC.DO-get.away-**IMM**-DU.MASC  
          *(then) that thing got away from them*                    (CP, 2011-09-13\_3-11-H)

(4.7.7)    ngay=**warda**            ba-gurduk-nu  
(MKK)    1s=**IMM**                    1s.14.IRR-drink-FUT  
          *I'll drink it (now)*                    (AlxL, PSE)

There is a more dramatic obsolescence in the disappearance of synthetic nominal predicates (Blythe, 2010, pp. 136–140, 161–162; Walsh, 1996). The simpler of these structures involves a nominal root becoming a clause predicate by the addition of an object pronoun suffix, along with various other number markers or incorporated body parts. The quality of the noun or adjective is predicated to the participant indexed by the object pronoun:

(4.7.8) lurruwitj<sup>35</sup>-ngi-be  
strong-1S.DO-arm  
*I have a strong arm* (Walsh 1996: 239)

(4.7.9) darrarart-wunku=ka-nintha  
thief-3PC.DO=TOP-DU.MASC  
*those two are thieves* (Walsh 1996: 239)

An alternative structure, blending nominal and verbal characteristics into a single word, suffixes a light “do” verb to a nominal, attributing the nominal predicate to the subject of the verb:

(4.7.10) wirrit-**pumam**-ka-ri-neme  
cruel-**3PL.DO(8)**-PC-bum-PC.MASC  
*those people are cruel* (Walsh 1996: 239)

(4.7.11) pakpak-**mam**-be  
cramp-**3S.DO(8)**-arm  
*his arm is cramped* (Walsh 1996: 239)

We do not know how common such structures were in SMP, but in MKK they are absent, or at least non-productive. I have encountered only one synthetic nominal predicate, which seems to be fossilized into a formulaic question that I have been asked more than once by kigay:

(4.7.12) kardu palngun-nyi-ma?  
PERS woman-2S.DO-HAVING  
*do you have a wife/girlfriend?* (Notes, 2013-01)

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<sup>35</sup> *lurruwitj* “strong” appears to be an older form. In my data and in Street’s dictionary (2012) it is *lurrutj*.

Meanwhile, the *-pun ~ -wun* 3PL.DO suffix that appeared in these structures, predicating the nominal to a third-person plural subject, has been re-analysed in MKK as a plural marker in a noun phrase, rather than a predicator. The re-analysed usage is not common, and may be lexically specific: there are just nine instances in my corpus, of which seven involve attachment to the adjectives *murntak* “old” and *murlak* “wild, dangerous”, and two instances attach to the noun *mange* “hand”:

(4.7.13) *kardu ngalantharr murntak-pun=ka*  
 PERS old.man old-3PL=TOP  
*kanyi-ngu=ka matha purni-wurdeng-dha*  
 PROX-HITH=TOP EMPH 3PL.GO(6).PST-creep-PST  
*the old men used to creep around here* (CK, 2011-09-17\_03)

(4.7.14) *pawathu ngawa ku murlak-pun*  
 over.there RIGHT? ANIM wild-3PL  
*pangu parde-lili-dha=matha*  
 DISTAL 3PC.BE(4).PST-walk-PST=EMPH  
*over there a big group of enemies (Japanese) came walking up*  
 (PIP, 2011-09-01b\_02)

(4.7.15) *kananganthan ini-ka*  
 emu DEF=TOP  
*nantji mange-wun nukunu ngawa marrare=yu*  
 THING hand-3PL 3s RIGHT? before=TAG  
*the emu used to have hands, didn't he?* (DP, 2011-09-01b\_02)

#### 4.7.3 New nominal morphology

MKK exhibits some minor instances of morphological innovation on nominals. One morpheme is clearly a recent innovation, because it derives from an English nominal borrowing: *-mup* (< “mob”, used for a herd of cattle or idiomatically for

a group of people in northern Australian English) attaches to a wide range of place names, common nouns and adjectives, deriving the meaning “people associated with X”:

(4.7.16) ngarra      **Simit-mup**      parnamka-wat-nime      nganaka?  
 LOC      **Sumich-PPL**      3PC.BE(4)-go.together-PC.MASC      RIGHT?  
*they went up to **Sumich’s friends’** place you know?* (PP 2011-09-01\_01)

(4.7.17) nekinime    kanyi=ngu-yu    **lalingkin tarangka-mup**    tru  
 1PC.INCL    PROX=HITH-TAG    **ocean**    **clear-PPL**    true  
*we here are **clear ocean people**, true*      (PP, 2011-09-01\_01)

(4.7.18) mange      ngarra      **olimpik-mup-mini**  
 like      LOC      **Olympics-PPL-TRY**  
*like people in the Olympics*      (DP, 2011-09-01\_01)

A similar borrowed derivational *-mob* is reported for Roper Kriol (Nicholls, 2013, pp. 286–7).

Secondly there is a genitive suffix *-nukun*, which may or may not be innovative. The use of this suffix is not attested in any of the existing MP literature (though note the homophonous apprehensive *=nukun*, §8.5), but is very common in kigay speech. Of course it may not be new, but simply undocumented. However I would argue that if this suffix did exist in SMP, it must have been considerably less common, and perhaps more restricted in its function. If *-nukun* had the same frequent and wide-ranging usage in SMP as it has in MKK it seems unlikely that the early grammatical descriptions (Flynn, 1950; Street, 1987; Walsh, 1976) would all have omitted it. I label *-nukun* a “genitive” because it marks a noun as being either the possessor of the head noun, or in other types of inalienable association:



- (4.7.19) penime     **da**     **Kuki-mup-nukun**     pana  
3PC.MASC     PLACE     [NAME]-PPL-GEN     ANAPH  
palyirr     da     penime=yu  
hill     PLACE     3PC.MASC=TAG  
*that's Cookie mob's hill*     (PP, 2011-09-01\_02)
- (4.7.20) pelenangka **ku**     **kardu-nukun?**  
kidney.fat     ANIM     PERS=GEN  
*human kidney fat?*     (DP, 2011-09-01\_01)
- (4.7.21) **da**     **elikapta-nukun**     kirra-at  
PLACE     helicopter-GEN     3.STAND(3).IRR-stand  
*a place for helicopters to land*     (DP, 2011-09-01\_01)
- (4.7.22) **da**     **mep ini=ka**     **da**     **kanyi-nukun**     da     ngalla     kanyi  
PLACE     map DEF=TOP     PLACEPROX=GEN     PLACE whole     PROX  
*the map of this place, this whole place*     (DM, 2012-07-15)

These are the only bound morphemes that I would characterise as new in MKK. However in the verbal morphosyntax there are both sequential and paradigmatic changes. These involve changes of verb suffix ordering and degrees of boundedness to the verbal word (Chapter 10), and a merger of TAM categories marked jointly on the verb classifier and the suffixes (Chapter 11).

#### 4.7.4 Occasional grammatical mixing

I have stated that MKK is essentially faithful to MP grammatical structures, but in the corpus of natural speech recordings there are very occasional insertions of English/Kriol grammatical material. There are a handful of instances in the corpus where codeswitches to English occur, without any English speakers having appeared in the conversation. For most of these there is no clear

explanation for why the codeswitch should have occurred – not least because the very meaning of the exchanges is often somewhat opaque:

KM: [pointing at the sun setting over the ocean]

tjet	kanyi=ngu	thu-riwu	ne-birl
straight	PROX=DIR	2S.SLASH(23)-count	2S.DO.RR(10)-look

*straight up here, measure it, look (how far it is)!*

DP: pana-yu

ANAPH-TAG

*that thing (the sun)*

**KM: you cry**

RM: disten karrim pangu=matha-ngu

distance 3S.STAND(3).PRES DISTAL=EMPH-DIR

*it's over there in the distance*

(2012-07-09)

There are also a handful of occasions where English/Kriol function words contribute to the grammatical encoding of an otherwise MP clause. Examples 4.7.23–5 show some rare borrowings of English conjunctions and prepositions. In one instance (4.7.24) there is a double-marking of the spatial origin, using both the English preposition *from* and the MP ORIGIN marker *-kathu*.

(4.7.23) wurda ngawa ... **bikus** kanyi ngawu  
 no RIGHT? ... because PROX RIGHT?

ku fadha ngalla kanyi bangam-rurt ngawa  
 ANIM priest big PROX 3S.14-find RIGHT?

*no, **because** the Great Priest (Father Docherty) found this place*  
 (DP, 2012-06-20\_29)

(4.7.24) **from** Dawun-kathu dim-thutj  
 from Darwin-ORIG 3S.SIT(1)-swim  
 pangan-thutj=ka Mendura-matha  
 3S.ARRIVE(20)-swim=TOP Mandora-EMPH  
*he jumped in the water **at** Darwin, and swam all the way to Mandora*  
 (PP, 2011-09-01)

(4.7.25) Nardirri-kathu **tu** Nganthawudi  
 Nardirri-ORIG to Nganthawudi  
 isi thama tjarndu tji-ku nawa  
 ABLE 2s.do(34) boat 2S.SIT(1)-run RIGHT?  
*from Nardirri **to** Nganthawudi you can go by boat, eh?* (DP, 2011-09-01)

Example 4.3.28 shows an innovation derived from the Kriol function words, *i bin* 3S.MASC + PAST (Sandefur, 1979, pp. 86–126), apparently re-analysed as a single word *ibin* and deployed as a past tense marker without any pronominal value:

(4.7.26) **ibin** da pawathu **ngem** ngamimarda  
 PST place over.there 1s.SIT(1) other.side  
*I've been living over the other side* (LP, 2012-06-30)

When I discussed this example with the speaker, he confirmed that the word is from “pidgin” and means “before”. He offered some further examples:

(4.7.27) **ibin** nukunu kardi-djegdjek-tha  
 PST 3s 3S.BE(4).PST-play-PST  
*he was playing* (LP, Notes\_2013-06)

There is one structure in which grammatical *forms* are not borrowed, but an English syntactic *structure* is imported. Example 4.7.28 shows that when English numbers are borrowed in an adjectival role, they may be used with an Adj + Noun word order, as in English, rather than the MP word order which is always Noun + Adj.

(4.7.28) [wan darrikardu] [wan femili] [wan lengkwitj] thanam-ngerren-ngime  
 one people        one family one language 1INCL.BE(4)-speak-PC.FEM  
*one people, one family, we speak one language* (MAK, 2013-07-11\_02)

The Adj + Noun phenomenon is not entirely limited to numerals, as can be seen in the NP *nantji waitpela stap* in example (4.7.2) above. However, all these types of grammatical insertions have only a handful of instances in the corpus (and in the case of the Kriol insertion, a single instance). It is possible that this is an under-count, since these short and rather unexpected forms are easy to miss in transcription, and are sometimes elided by native transcribers. But in any case a greater number of such instances would be required before any patterns could be analysed.

#### 4.7.5 Phonology

MKK phonology is essentially that of SMP, but with the addition of new phonological material in English/Kriol lexical borrowings (Chapter 6). The other distinction from SMP is in the phonological reduction of forms. This is particularly distinctive for syllable onset /p/ and /k/ obstruents, the lenition of which is the topic of Chapter 7. There are other forms of lenition evident in MKK, though in most cases it is not clear whether these are distinct from SMP in general, or just from the SMP careful speech exemplars that have formed the basis of previous language description. The two strongest patterns, apart from /p/ and /k/ lenition, are intervocalic deletion of voiced obstruents (4.7.29–30), and initial deletion of the nasals /ŋ/ and /n/ (4.7.31–32). (All examples are taken from careful speech elicitation sessions.)

(4.7.29) /**p**igunu/                                → [**pun**:u]  
           3PL  
           *them*                                        (MJ, PSE)

- (4.7.29) /**ma-d**arkit-nu/ → ['**ma:**rkitnu]  
 3S.HANDS(8).IRR-tie-FUT  
*he'll tie it* (PP, PSE)
- (4.7.30) /**ŋ**alaŋtar-**ŋ**alaŋtar/  
 old.man-RDP → [,alaŋda'raŋdar]  
*old men* (KM, PSE)
- (4.7.31) /**ci**mu=ka **ŋ**inta/ → ['cimuka inda]  
 nose=TOP ANAPH  
*that's a nose* (AdB, PSE)

These forms of phonological reduction are not examined in detail in this thesis, but they are all quite widespread in MKK careful speech, and also found in SMP natural speech, seeming therefore to support Dressler's (1984) argument that phonological reduction begins in casual speech registers and gradually spreads to careful speech. But it is also possible that the phonological reduction of MKK is a stylistic effect, rather than a process of physical economy as in Dressler's "natural phonology". A detailed examination of these reductions would include both examination of style shifting in MKK, and further exploration of these reductions in the speech of older speakers. However these matters are deferred for further research.

There are undoubtedly other phonetic variables that might be identified in MKK. One non-leniting variable I have noticed is the backing of velar consonants /k/, /g/ and /ŋ/ to a uvular position, which seems to be a stylistic effect. It is not clear to what extent this was deployed by previous generations, or whether it fits with a wider Australian pattern of dorsal velar backing (Butcher & Tabain, 2004). This is, again, a topic for further research.

#### 4.8 Emic views of Murriny Kardu Kigay

A previous study of community perspectives on MP reports a general consensus that the language is “strong”, and that young people may be seen as speaking somewhat differently, but their language is still MP “right through” (Kelly, Nordlinger, & Wigglesworth, 2009, p. 11). I have certainly encountered such sentiments in my fieldwork, but I have also encountered rather more pejorative views of young peoples’ speech. While the speech of young people is clearly recognized as MP, and is not conventionally given any other label, it is derided by some as being corrupted or “mixed up”. Of course such opinions are almost universal in the views of older people regarding the speech of the young (Keller, 1994), but the contexts and consequences of such views are *not* universal, they are highly particular to the language and speech community.

Many of the criticisms I have heard of young peoples’ speech are non-specific. For example, when transcribing natural speech recordings involving young people, it is quite common for the native-speaker transcriber working with me to berate the speech being produced in the recording, usually in terms such as *wiye dimngerren* “he’s speaking badly”, or in English, “He doesn’t know how to talk!” It is not clear what features are being criticized here, but heavy phonological reduction seems to be a factor. More specific criticisms of young people’s speech focus on mixing with English vocabulary, or the use of “short words” (the latter is also mentioned in Kelly et al, p.11). The following is an example of one of the more explicit commentaries I have documented, given by a man from the Nangu clan (MP) who is in his late 40s, and who has some sense of responsibility for preserving what he sees as proper MP:

MN: *Kardu kigay kanyi-ka, pumbankangerrenngime murriny parnturtparn-re, Murrinh Patha murriny parnturtparn. Ngini-puny mamkarnu-warda, murriny Ingklitj-thangunu. Ingklitj, Murrinh Patha Ingklitj kardu mam nyini.*

JBM: *I murriny ngaliwe?*

MN: *Ngaliwe tharra-ngini pandangu, ngaliwe damatha murriny ngarra wurrangerren. I mamkarnu-warda murriny Ingklitj.*

MN: The young men, they speak the light language, the light Murrinh Patha. It's like they're mixing<sup>36</sup> it together with words from English, they speak Murrinh Patha with English.

JBM: And short words/sentences?<sup>37</sup>

MN: Short words (? over there), just short words when they speak. And they mix it with English. (2012-01-12)

It is not clear what might be meant by the various critiques of “short words” in young peoples’ speech – and given that *murriny* covers a semantic range including everything that we would translate as “word”, “name”, “sentence”, “story”, “language”, we cannot be sure that this refers to words as such, though that seems the most likely interpretation. It may refer to either the phonological reduction of forms, or the reduced use of highly polysynthetic verbs, as mentioned in the previous section.

#### 4.8.1 A “light” language

Another element of MN’s comments above is the description of MKK as *murriny parnturtparn* “light language”, which he elsewhere contrasts to the language of old people, which is *murriny yittjit* “heavy language”, and which comes *da nginalminy-kathu* “from the roots” (Notes, 2013-11). The light/heavy opposition

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<sup>36</sup> The verb used here, *mamkarnu*, is elsewhere attested when describing mixing tea with milk (Blythe 2011-08-28).

<sup>37</sup> Asking leading questions like this always makes answers less reliable in Wadeye; however, I had recently been told that by another native speaker that young people speak with *murriny ngaliwe* “short words/sentences”; and MN seemed to accept the notion easily enough.

does not, however, map neatly onto a positive/negative evaluation. *Murriny yittjit* is clearly valued by people on some level as being a deeper and more exclusive form of linguistic knowledge. But it is also seen as “difficult”, while *murriny parnturtparn* is “clear” and easy to understand (Walsh, 1976, p. 5). There are certainly other metaphorical domains in which *parnturtparn* is preferable to *yittjit*: for example if one has a cold and an excess of mucus, one’s chest is *yittjit*, whereas a healthy chest is *parnturtparn* (Notes, 2012-07).

The metaphorical description of heavy/light language is common in Aboriginal Australia, and is often used to describe the difference between a pre-settlement variety, and a variety influenced by contact with English or Kriol (e.g. O’Shannessy, 2005; Schmidt, 1991, p. 122). But heavy/light is clearly not just a matter of English influence, since there are many pairs of long-established neighbouring dialects that have been described by native speakers using heavy/light or big/small metaphors, for instance in Ndjébbana (McKay, 2000), Nyikina (Stokes, 1982, p. 1), Ngan’gi (Reid & McTaggart, 2008, p. 321), Wagiman (Wilson, 2001), Warlpiri (Jane Simpson, *pers. comm.*) and Wik (Sutton, 1991, p. 56).

There has been no systematic research into how emic heavy/light attributions may correlate to linguistic features, but there is some evidence that the levelling of paradigms – that is to say, the reduction of morphological complexity – is involved. In Nyikina the variety that is designated “heavy” or “big” has more morphophonemic alternations and suppletive verb forms than the “light” variety (Stokes 1982: 13, 19-21, 156). In Ngan’gi, the light dialect Ngan’giwumirri collapses the past and present categories of the heavy dialect into a single non-future category (Reid & McTaggart 2008: 321). In Warlpiri the light dialect Wakirti Warlpiri (lit. “with the tip of the tongue”, and *not* the same as the Light Warlpiri identified by O’Shannessy, see §13.4.3) collapses distinct subject- and object-controlled complementisers into a single complementiser (Simpson, 1991, p. 316). In MP the light and heavy varieties are not so clearly separate as “dialects”, but could be better described as stylistic tendencies in the language. When invited to provide characteristic light/heavy differences, middle-aged



speakers identified the polysynthetic incorporation of a body part object as “heavy”, while an alternative verb form with no incorporation is “light”:

(4.8.1) ku were bangam-ngi-**bu**-rlart<sup>38</sup>

Heavy ANIM dog 3S.BASH(14)-1S.DO-**thigh**-bite  
*the dog bit me on the leg* (MM, 2011-09-13c)

(4.8.2) ku were bangam-ngi-lele

Light ANIM dog 3S.BASH(14)-1S.DO-bite  
*the dog bit me* (CP, 2011-09-13c)

Characterisations of the *murriny yittjit* also showed much more extensive use of “presentational” verb forms as an alternative to the less marked non-future tense. Unfortunately the grammatical distinction between these forms is not well understood (§11.2.7), but this might well provide another example of a morphological distinction that is levelled in the light variety.

In any case it is clear that attributions of heavy/light in MP are not simply a matter of English influence, but more generally refer to differences between conservative and innovative varieties. Therefore the description of MKK being a “light” form of speech might refer either to the use of English vocabulary, or to morphological levelling, or both. The meaning of “heavy” and “light” in Murrinh Patha, and in Australian Aboriginal languages generally, is a topic warranting further research.

#### 4.9 Summary

In this chapter we have seen that Wadeye is a community in which the Murrinh Patha language is dominant among Aboriginal people of all ages. This has been at

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<sup>38</sup> According to Street (1989), the verb root *-rlart* (“to bite”) can *only* be used in combination with incorporated body parts.

the expense of other Aboriginal languages, the speakers of which were in fact more numerous in the original Mission population. Contemporary kardu kigay, therefore, grow up in an MP linguistic milieu.

Kigay have only very limited exposure to English, and most have very limited competence or confidence in the language. There is also some exposure to Kriol, especially when travelling outside Wadeye, but also among a small number of in-migrant Kriol speakers.

The linguistic situation is quite different when we turn to the digital/social media network, where those kigay who participate switch to an unstable, emergent form of Aboriginal English blended with global textese orthographies and discursive conventions. I call this switch in the media context “digital diglossia”.

Finally, in this chapter we have had a brief introduction to the speech of kigay themselves, which I label Murriny Kardu Kigay (MKK). We have seen that this an innovative variety of MP, involving large numbers of English lexical borrowings, some subtle morphosyntactic developments, and some phonological reduction effects which may be stylistic or age-graded. These features will be subject to linguistic analysis in the chapters that follow.

## Murrinh Patha Phonology

### 5.1 Introduction

This chapter outlines the phonology of Murrinh Patha, largely setting aside phenomena that have been observed specifically in Murriny Kardu Kigay (MKK). MP phonology has previously been described in Walsh (1976) and Street and Mollinjin (1981). This chapter builds on their findings, and draws on archival recordings made by Walsh (1986), Butcher (1990) and Blythe (2004) (§1.5.5).

This chapter functions as a general reference guide to MP phonology, since this is foundational for most or all of the topics discussed in subsequent chapters. I have attempted here to give a fairly complete overview of the phonology, so that only some of the features described here are consequential for later topics. Many features will have some brief importance in providing evidence for an argument, but it is only the sections on voicing contrasts (§5.5), phonological domains (§5.9.2), the obstruent lenition process (§5.9.5.1) and stress in multimorphemic verbs (§5.10.3) that have major importance. Readers who are not especially interested in MP phonology may choose to skip this chapter, and use it only where it is cross-referenced in later chapters.

### 5.2 Vowel inventory

Murrinh Patha has four vowels, /a, e, i, u/, analysed by Walsh as representing the four possibilities of high/low and front/back contrasts (1976:45), while Street labels the same four-way distinction as high/non-high and back/non-back (1981, p. 185). Vowel length is not contrastive, but vowels are lengthened when a single, open syllable acts as an independent phonological word (i.e. is not

cliticised), e.g. *ku=ngupu* [ku'ŋupu] “loggerhead turtle” vs *ku kardidha* ['ku: 'kadɪɖa] “the creature was there” (see §5.7.1).

The four vowels are realized approximately as [e, ε, ɪ, u], and a preliminary study (Stanton, 2013) suggests that vowel quality does not vary systematically between different word positions or between stressed and unstressed syllables. Neither does stress affect vowel length substantially, though word-final vowels are often significantly lengthened. On the other hand, neighbouring consonants very likely do affect vowel realisations – though this topic will not be examined in this thesis.

The topic of vowels will be returned to in §6.3, in which I discuss the integration of new vowels via English lexical borrowings.

### 5.3 Consonant inventory

The MP consonant array is “long and flat” like most Australian Aboriginal phonologies (Butcher, 2006), with six places of articulation (bilabial, lamino-dental, alveolar, post-alveolar retroflex, palatal and velar), but only a limited range of contrastive manners of articulation. There are oral obstruents and nasal stops at all points of articulation; however there are no phonemic fricatives. I refer to p/b, t/d etc. as “obstruents” rather than “stops”, since some obstruents have affricate or fricative realisations, and there is no contrast among stop/affricate/fricative manners of obstruent articulation. However we will see that in MKK a distinct series of fricative obstruents has been adopted (§6.4).

MP obstruents have voicing distinctions, which is highly unusual among Australian languages; however, as we shall see below, the voicing contrasts are somewhat restricted in their distribution.

	PERIPHERAL						
	Bilabial	LAMINAL				Palatal	Velar
		Dental	Alveolar	Retroflex			
Voiceless obstruent	p <p>	t̪ <th>	t <t>	ɽ <rt>	c <tj>	k <k>	
Voiced obstruent	b <b>	d̪ <dh>	d <d>	ɖ <rd>	ɟ <dj>	g <g>	
Nasal	m <m>	ɲ <nh>	n <n>	ɳ <rn>	ɲ <ny>	ŋ <ng>	
Lateral			l <l>	ɭ <rl>			
Trill / flap			r <rr>				
Approximant	w <w>		j <y>	ɻ <ɻ>			

**Table 5.3.1 Murrinh Patha consonant phonemes (Street & Mollinjin, 1981, p. 184; Walsh, 1976, p. 24); Organisation of consonant positions based on Butcher (2008).**

Table 5.3.1 is a composite of Walsh’s and Street’s analyses, together with some of my own observations as described in the sections that follow. Each phonemic cell gives the relevant IPA symbol as well as a practical orthographic representation (to be discussed below), which is used throughout this thesis. The greyed-out dental “ɲ” indicates that this is not a phoneme, but rather an allophone of the palatal /ɲ/ that will be given a separate orthographic representation for reasons explained below. The grey shading for the voiced palatal stop /ɟ/ signals that this is a rather marginal phoneme – as will be discussed in §5.5.2.

Besides the consonant inventory shown above, Walsh proposes three further phonemes: /ʔ/, /ɬ/ and a distinct alveolar flap /ɾ/. However none of these is well-evidenced, so they will not be treated as phonemic in this thesis.<sup>39</sup>

<sup>39</sup> Walsh proposes the rhotic flap and trill as separate phonemes, but Street convincingly shows that these are allophones, with the flap realisation specific to intervocalic environments, where it is in free variation with the trill (1987, p. 20). Walsh proposes a palatal lateral /ɬ/ as a phoneme, but this only occurs intervocalically, and never in a cluster with other consonants (e.g. /jeɬel/

## 5.4 Proposed allophony of dental and palatal consonants

Though mostly in agreement with Street’s analysis of MP consonants, the inventory given in Table 5.3.1 diverges from Street in listing dental and palatal<sup>40</sup> consonants as phonemically distinctive. Street proposes complementary distributions for all dentals/palatals as allophones of a single “laminal” place of articulation. In Street’s analysis, palatalisation occurs word-finally or before a front vowel. Therefore the dental allophone appears before back vowels in [ṭapak] “fog”, [ṭuru=wa] “go away”, [be.ɟemaṭa] “still”, while the palatal allophone appears before front vowels in [cimu] “nose”, [ce:] “ear”, [nici] “arm”, and word-finally in [pelpiç] “head” [pp. 21-22]). A single “laminal” obstruent phoneme of this type is well-attested in other Australian languages (Dixon, 2002, p. 562; Evans, 1995, p. 727). A similar dental/palatal alternation occurs for nasals.<sup>41</sup>

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“rain”, /paɽir/ “rock”). But since /l/ is permissible as a syllable coda (e.g. /ku kalpa/ “reef”), and /j/ is permissible as a syllable onset (e.g. /demjirjir/ “[the water] is boiling”) the palatal lateral can be more economically analysed as a two-consonant sequence /l/, /j/ across a syllable boundary. Finally, Walsh proposes the glottal stop /ʔ/ as a sort of sub-phoneme that occurs in just one word, /muʔmun/ “water rat”, required in that word and not replaceable by any other consonant (p. 25). Street (2012) lists the same item as “*mumun* or *mu’mun*”. This appears to be a borrowing from Wagiman (Wilson, 2001).

<sup>40</sup> The description of MP phonemes as “dental” and “palatal” is a convenient simplification. Butcher (nd: 5-6) has used palatography to show that in MP the dentals are articulated with the blade of the tongue contacting the alveolar ridge or the back of the teeth, and the tongue tip pointing up; the palatals make laminal contact anywhere from the alveolar ridge up to the pre-palatal area, with the tongue tip pointing down and more extensive laminal contact. The dentals are usually cleanly articulated stops, while the palatals are affricated; my impression is that this affrication – produced by the downward-pointing tongue tip – produces the primary audible distinction between the two consonants.

<sup>41</sup> But note that the /ṇa/ or /ṇu/ sequences only occur word-medially and never word-initially (e.g. [puṇu] “liver”, [ɲeṇ-ṇam] “I’m afraid” vs [ɲiɲi] “you”, [kaɲi] “here”, [muriɲ] “word” [p. 30]). In general /ɲ/ almost always occurs either as a word-medial syllable onset followed by /i/, or word-finally. There are only three common words that begin with /ɲ/ – /ɲiɲi/ “you”, /ɲinda/

Walsh rejects Street’s analysis of dental/palatal allophony and proposes a list of 21 counter-examples showing palatal /c/ followed by back vowels (pp. 50–53). There are a number of recent borrowings in Walsh’s set of counter-examples, including subsection names that were borrowed from Jaminjung in the early twentieth century (Stanner, 1958), and /cukin/ (< Eng. *stocking*). But there is one common and not-obviously-borrowed word that breaks Street’s rule: /cu/, which being a noun classifier for weapons and fighting, is quite common indeed. I am not aware of any cognates for this word in neighbouring languages.

The distributional pattern Street identifies for palatal and dental consonants shows that laminal phones are very strongly influenced by environment in MP – and this has probably been an allophonic *rule* at some point in the past, though it is no longer so. Walsh’s exception /cu/ shows that the distribution is not categorical, even in core indigenous vocabulary. Furthermore, the list of borrowed vocabulary containing either /ca/ or /cu/ has now grown well beyond those items listed by Walsh, and contains some very common words – e.g. *tjalatj* “jealous”, *tjaba* “late afternoon” (< *supper*), *tjandu* “boat” (< Jaminjung *jarndu*), *atjatj* “outside”, *tjutkat* “shortcut” and *tjuga* “sugar”. Conversely, there is at least one common borrowing, *think* “think”, that contains a dental followed by a front vowel. There are no absolute minimal pairs, but there are near-minimal pairs such as *tjaba* vs *thapak* “fog”, and there is no sign of a complementary laminal distribution being applied to the borrowed forms (§6.2).

The Wadeye “community orthography”, established by Street and his collaborators in the 1980s and since used at the school, spells all dentals and palatals as ⟨th⟩, ⟨dh⟩, ⟨nh⟩ based on the analysis of laminal allophony. Meanwhile the Murriny Patha Song Project spells the two articulations alternately as ⟨th⟩ / ⟨tj⟩ etc. (Barwick et al., 2009; Blythe, 2009, p. xiii). Since I do not accept the analysis of laminal allophony as a synchronic fact, and since my research on MKK

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“that’s right” and /ɲini/ (anaphoric demonstrative); and as we will see in §6.5, in MKK it may be disappearing word-initially altogether.

involves a high number of the English borrowings that contribute to breaking the rule, on this point I follow the Murriny Patha Song Project, rather than the community orthography.

The allophony of palatal and alveolar *nasals* has much fewer exceptions, in fact even in MKK I have identified just one: /pren pu/ < *brand new*. Though this is hardly strong grounds for a palatal/dental nasal contrast, to maintain greater consistency with the coronals I use both ⟨ny⟩ and ⟨nh⟩ in my orthography in accordance with phonetic expression.<sup>42</sup>

Some of the spelling differences are exemplified in Table 5.4.1.

Community orthography	Orthography in this thesis	Gloss
themen	tjemen	<i>tongue</i>
thinu	tjinu	<i>you will sit</i>
murrinh	murriny <sup>43</sup>	<i>language</i>
thapak	thapak	<i>fog</i>
thungku	thungku	<i>fire</i>
thu	tju	<i>weapon</i>
thaba	tjaba	<i>late afternoon</i>

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<sup>42</sup> Note that where a coronal nasal and a coronal stop appear in sequence (which is always across a syllable boundary, see §7.9 below), they are homorganic, i.e. they both take the same position with respect to the dental / alveolar / palatal / retroflex distinction – e.g. /dalmanɲti/ “scorpion”, /bukmanɲtar/ “red”, /nintu/ “horse” (note vowel shift from the widespread source < *nantu*), /matɲu/ “he will get it”, /ngani-kut-nu/, “I will collect them”. Non-homorganic stop-nasal clusters are allowed only if one of the cluster is non-coronal, e.g. /watmam/ “quiet”, /kikmun/ “beeswax”, /ngucɲen/ “ordinary”. In view of this pattern, the community orthography simplifies spellings to “dalmarnti” rather than “dalmarnrnti”, “bukmantharr”, “martnu” etc. – a convention which I have followed.

<sup>43</sup> The spelling conventions of this thesis dictate that the word for language should be spelt “murriny”, however the language name Murrinh Patha will be spelt as it has been by others over the last thirty years, to avoid the scourge of multiplying spellings of language names.



thanpa	djanpa <sup>44</sup>	<i>dance genre</i>
nhinhi	nyinyi	<i>you</i>
mamnhe	mamnye	<i>I told her</i>

**Table 5.4.1 Comparison of spelling differences between this thesis and the community orthography**

## 5.5 Voicing contrasts

The vast majority of Australian languages in the Pama-Nyungan family have just a single obstruent series. Among non-Pama-Nyungan languages of the north it is rather more common to have some variety of fortis/lenis distinction, but these are usually distinguished primarily by consonant length, and are contrastive only intervocalically (Evans, 2003, p. 81). The MP obstruent distinction is therefore unusual since voicing is one of the primary means by which it is signalled, and because it applies word-initially for some voiced/voiceless pairs.

Nonetheless, the voicing contrasts in MP obstruents are somewhat restricted in their distribution, and some may be probabilistic rather than deterministic contrasts – that is to say, subject to certain degrees of neutralization in casual or even in careful speech (Sankoff, 1988). There are no contrasts at all in syllable codas, and following nasals the contrast is usually phonetically neutralized. Word-initially only a subset of contrasts is active, so that the full range of contrasts appear only in word-medial, intervocalic positions.

Table 5.5.1 summarises the distribution of obstruent voicing contrasts according to position in the word. Cells shaded grey indicate lack of voicing contrast, and a dash indicates that the obstruent does not occur at all in that position.

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<sup>44</sup> It is my impression that *djanba*, a dance genre, is pronounced with a voiced initial. It is a borrowing from Jaminjung (< *junba*) or some other language to the south (Barwick, 2011). However I argue below (§5.5.2) that the palatal voicing contrast in MP is rather unstable, with a tendency towards initial devoicing. The fact that the community orthography represents *djanba* with a voiceless initial further supports this.

Monomorphemic forms are used where possible, but complex words are used where these are the only forms for which a clear contrast is attested. The sections that follow will provide more detail about the phonetics of the contrast, and the range of contrasts active in word-initial, intervocalic and post-nasal positions. With regard to syllable codas, there are no obstruent contrasts whatsoever, as all are consistently realized as voiceless, unreleased stops. In §6.9.2 we will see that this voiceless coda is maintained even when borrowing English/Kriol words with final voiced stops.

The place of articulation with the most marginal voicing contrast is the palatal, where obstruents are almost always voiceless. The voiced /j/ appears in only a few words, and even in those is sometimes realized as a voiceless [c].

	<b>Bilabial</b>	<b>Dental</b>	<b>Alveolar</b>	<b>Retroflex</b>	<b>Palatal</b>	<b>Velar</b>
<b>Word-initial</b>	/pepe/ <pepe> “down”	/tuŋgu/ <thungku> “fire”	/tiwungu/ <tiwungku> “wedge-tailed eagle”	-	/cipmam/ <tjipmam> “black”	/kaɖu/ <kardu> “person”
	/bebe/ <bebe> “vomit”		/diminjɪn/ <dimirnin> “gravel”			
<b>Intervocalic</b>	/pepe/ <pepe> “down”	/naɽap/ <na-thap> 2S.HANDS(8). FUTIRR-touch	/kutul/ <kutul> “curly”	/taɽa/ <tharta> “rat sp.”	/kaŋaci/ <kangatji> “mother’s country”	/nukunu/ <nukunu> “he, him”
	/bebe/ <bebe> “vomit”	/ɽaɽap/ <tha-dhap> 2S.POKE(19). FUTIRR-shut	/tiduk/ <tiduk> “behind”	/maɽa/ <marda> “stomach”		/nigunu/ <nigunu> “she, her”
<b>Post-nasal</b>	/banpak/ [banbak] <ban-pak> 3s.17-put	/maɽɽap/ [maɽɽap] <mam-thap> 3S.HANDS(8). NFUT-touch	/manta/ [manda] <manta> “near”	/maɽɽal/ [maɽɽal] <mam-rtarl> 3S.HANDS(8). NFUT-chop	/naɽci/ [naɽɽi] <nantji> “thing”	/cimkampa/ [cimɽamba] <tjim-kampa> 2s.SIT(1).NFUT- laugh
	-	/ɽaɽɽap/ [ɽaɽɽap] <tham-dhap> 2S.POKE(19). NFUT-shut	-	-	-	/damɽuɽuk/ [damɽuɽuk] <dam-gurduk> 2s.13.NFUT- drink
<b>Syllable coda</b>	/mup/ <mup> “sit!”	-	/batbat/ <batbat> “right (side)”	/te.ɽet/ <terert> “many”	/karac/ <karratj> “devil”	/karak/ <karrak> “kookaburra”

**Table 5.5.1 Distribution of obstruent voicing in SMP. Grey cells indicate lack of voicing contrast, and a dash indicates that the obstruent does not occur at all in that position.**

Table 5.5.1 also demonstrates some spelling principles deployed in this thesis. Letters p/b, t/d, k/g are in general used according to whether the phonemes

they represent are voiced or voiceless. In post-nasal position, where there is no voicing contrast, the letters ⟨p⟩, ⟨t⟩, ⟨th⟩, ⟨tj⟩ and ⟨k⟩ are used, to minimize divergence from the community orthography, and to avoid the potential confusion of ⟨ng⟩ and ⟨ngg⟩ spellings involving velar nasals. The one exception is where a bound morpheme can otherwise be identified as having a voiced initial obstruent (e.g. *-dhap* “shut”), in which case I retain the “voiced” spelling after nasals (e.g. *dendhap* “it’s closed”).

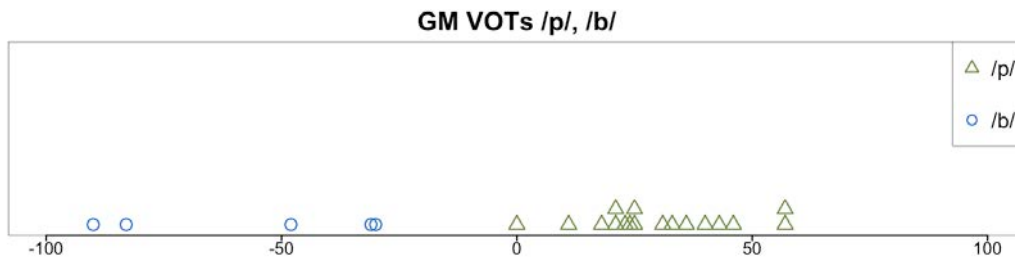
### 5.5.1 Phonetic realisation of voicing contrast

Butcher (2004) describes the bilabial stop contrast in MP, reporting on differences in stop closure duration and intra-oral pressure. The primary contrast correlate is a much higher degree of intra-oral pressure in the voiceless /p/, which is associated with an open glottal aperture (i.e. a voiceless stop), while the voiced /b/ uses a much lower (sometimes negative, therefore “implosive”) intra-oral pressure to help maintain glottal pulsing (i.e. voicing) throughout much or all of the stop duration. Closure duration, on the other hand, only differs slightly between /p/ and /b/.

The intra-oral pressure differences reported by Butcher clearly do result in the expected voicing differences. Inspection of careful speech tokens from a single standard MP speaker in Praat (Boersma & Weenink, 2012) shows that word-initial /b/ has negative voice onset times (VOTs), i.e. “pre-voicing”, spread rather widely from 30–90ms before stop release, while /p/ has positive VOTs, i.e. “voicing lag” clustering between 10–50ms:<sup>45</sup>

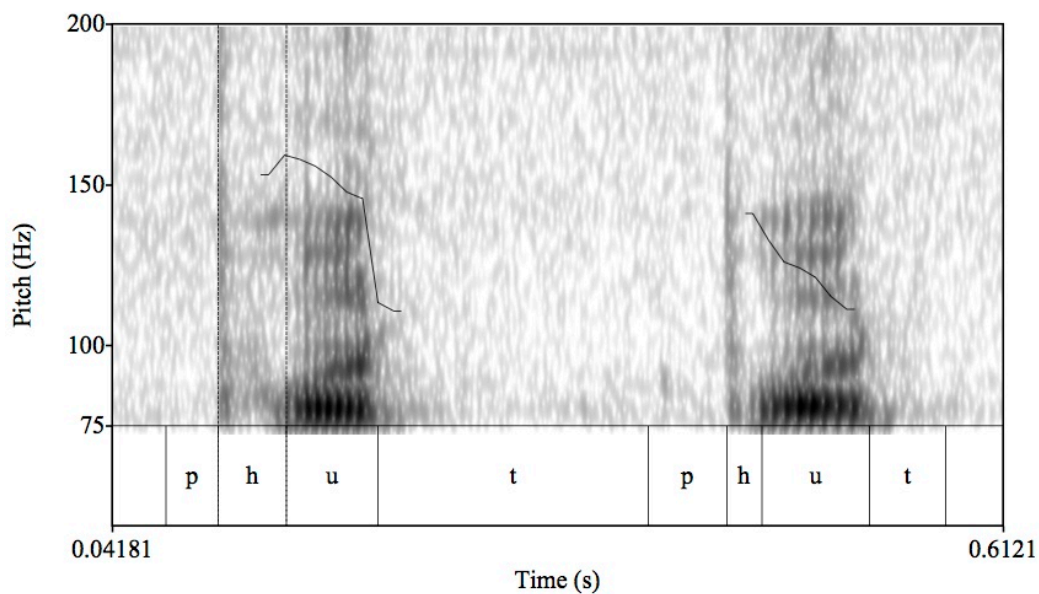
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<sup>45</sup> However it is not clear whether the word-initial voicing contrasts are produced by all speakers. In further examination of careful speech data I found some instances of words elsewhere evidenced as being /p/-initial and /b/-initial respectively (e.g. *patha* “good”, *bangkardu* “I see”) being realized almost identically with coincident VOT and no significant release burst (WD, SM, PSE; KB, Walsh 1986). Further quantitative research would be required to establish how the voicing contrasts are distributed among speakers.



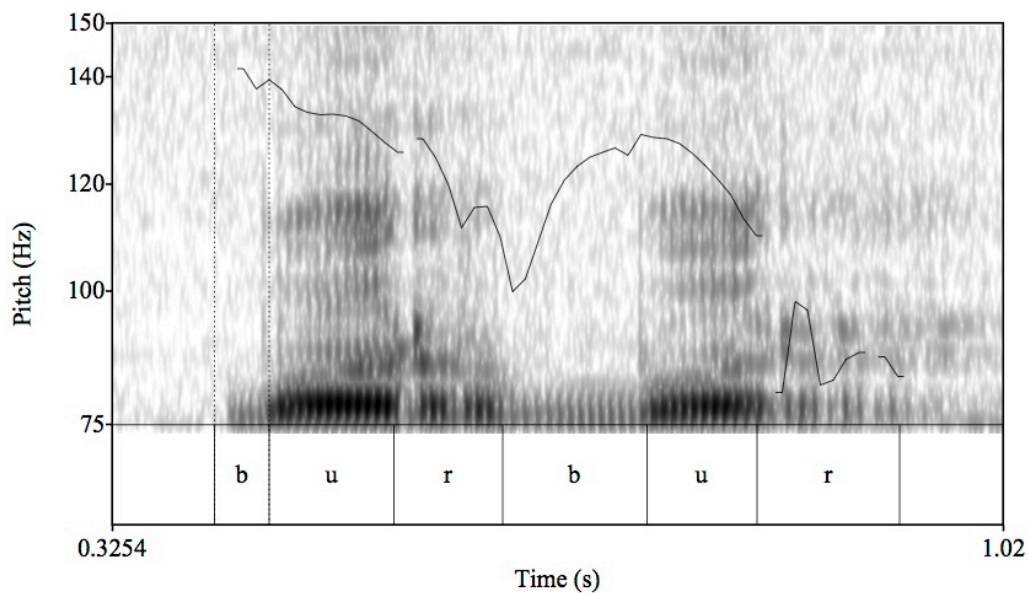
**Figure 5.5.1** Word-initial /p/ (N=22) and /b/ (N = 6) VOTs from a single MP speaker (GM, Butcher 1990)

Another acoustic difference resulting from intra-oral pressure is the release burst that distinguishes /p/ from /b/. Figures 5.5.2–3 show sample spectrograms<sup>46</sup> from the same single speaker, exhibiting a large burst of turbulent noise on the release of /p/, and little or no burst on the release of /b/.



**Figure 5.5.2** Spectrogram for *putput* “pregnant” (GM, Butcher 1990)

<sup>46</sup> Similar spectrograms can be found in Walsh (1976: 320).



**Figure 5.5.2 Spectrogram for *burr* “cold” (GM, Butcher 1990)**

The release burst, together with VOT lag, produce an auditory impression of “aspiration” on many voiceless obstruent tokens.

Butcher’s phonetic study also reports a fairly small difference in average closure duration between voiced and voiceless intervocalic tokens, with the voiceless tokens about 20% longer than their voiced counterparts (2004: 552).

We cannot assume that the contrast is signalled in the same way at all points of articulation, though my observations of VOT and release bursts for other obstruents are similar to those for bilabials. One exception is the palatals, which have a fricated release, and therefore no release burst on the voiceless /c/ – though in any case I will argue that the palatal voicing contrast is rather marginal in standard MP (see next section and §6.2). In the velar and dental positions – which only have the voicing contrast intervocalically – the voiced alternants are characterized by frication. For /ḍ/ a fricated [ḍ̪] realisation is by far the most common, while for /g/ the fricated [g̪] realisation accounts for some 40% of tokens (§7.3.1).

### 5.5.2 Palatal voicing contrast?

Street and Mollinjin propose that there is a voicing contrast in the palatal obstruents (1981, pp. 185–186), but I consider voiced /ʝ/ to be a rather marginal phoneme, since it is evidenced only in a very few, probably borrowed lexemes – and because the voicing of palatal obstruents seems too variable to support a solid phonemic contrast. I here give just a brief outline of my observations, but a more thorough investigation of palatal obstruent voicing in MP would require quantitative analysis to establish whether this is in fact a probabilistic voicing contrast between lexical items.

In an early paper, Street (1980, p. 8) states in passing that there are no voiced laminal obstruents word-initially. However in his later phonological analysis (1981) he does present a few candidates for words that begin with a voiced palatal, though these tend to be rare and difficult to elicit (e.g. *dje* “blue-swimmer crab”), and in any case show variable voicing on the available recordings.<sup>47</sup> There are only two common standard MP words that I perceive as consistently [ʝ]-initial,<sup>48</sup> but these are probably Jaminjung borrowings: *djungdjung* “kiss” (coverb, < J. *jung*); *djanpa* “ceremonial dance” (< J. *junba*). Even with these, the latter is represented as voiceless *thanpa* in the “community orthography” (§5.4), suggesting it may be subject to variable devoicing.

Again, word-medially the only well-attested voiced palatals (not including post-nasal voicing), are probably recent borrowings. For example *wadji* “person who

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<sup>47</sup> One strong candidate for a word-initial /ʝ/ is the demonstrative *dji* (which would purportedly contrast with *tji* 2s.sit(1). I have only encountered the former as the unstressed element in a compound demonstrative *dji-wangu* [ʝi'waŋu ~ ʝeŋu] “over there”, but when spoken as a phonologically independent word the obstruent may be voiceless (e.g. on Walsh [1986: Tape 00]). A minimal pair proposed by both Walsh and Street is *tje* “ear” vs *dje* “blue swimmer crab”, yet in recordings by Butcher (1990) the latter is variably voiced or voiceless (even despite it being read from a list where it is spelled “dhe”). Another candidate for a voiced palatal is a word for food, which Street sometimes spells as *djepdjep*, but lists as a dictionary headword *tjepdjep*. This variability supports my thesis that the voicing contrast for lamino-palatals is not strong.

<sup>48</sup> Unfortunately I have not found any recordings of these words of high enough quality to check voicing.

marries incorrectly” (< *waji*, widespread across northern Australia [Simpson *p.c.*]) and *Madjilindi* (place name, not in MP territory). The borrowed verb root *djung* can also be used as an embedded root, producing voiced word-medial forms such as *ngamadjungnu* “I will kiss his hand” (Walsh 1986: tape 20). The one common word-medial /ɟ/ that is not obviously borrowed is the verb root *-djegdjek* ~ *-djedjek* “play” (Street 1980: 2), for which I do not know of any borrowing source. On all recordings I have heard the palatals in this root are either voiced or approximant: *panamkayedjekngime* “they’re playing” (DP-phon), *panamkadjeyekngime* (AlxL, PSE). The voiced /g/ coda on the first syllable is also highly unusual in MP, and is perhaps somehow related to the unusual voiced palatal. But in MKK this root is also well attested as a coverb, in which case its initial palatal is voiceless – i.e. *tjeyek* – which lends further support to the idea that word-initial palatals are generally voiceless. See also §7.8.1(2) for discussion of *-djegdjek*.

I argued above that /c/ and /ɟ/ are contrastive because there are enough common lexemes that consistently take one or the other in the same environment. Though /c/ and /ɟ/ also have some lexical contrast in traditional MP, partly in Jaminjung-derived vocabulary, it is neither lexically extensive nor consistently realised. In MKK a more extensive range of voiced palatal words are introduced from English or Kriol, and I will argue that under this influence c/ɟ have become more solidly phonemic (§6.9.1).

### 5.5.3 Word-initial contrasts

	Bilabial	Dental	Alveolar	Retroflex	Palatal	Velar
<b>Word-initial</b>	/pepe/ <pepe> “down”	/ɟungu/ <thungku> “fire”	/tiwungu/ <tiwungku> “wedge-tailed eagle”	-	/cipmam/ <tjipmam> “black”	/kaɟu/ <kardu> “person”
	/bebe/ <bebe> “vomit”		/diminjɪn/ <dimirnin> “gravel”			

(extract from 5.5.1 above)

Word-initially, it is only the bilabial and alveolar voicing contrasts that are active, with dental, palatal and velar obstruents neutralizing to voiceless-only phones. Retroflex consonants do not occur contrastively in word-initial positions, as discussed in §5.7 below.

#### 5.5.4 Intervocalic contrasts

	<b>Bilabial</b>	<b>Dental</b>	<b>Alveolar</b>	<b>Retroflex</b>	<b>Palatal</b>	<b>Velar</b>
<b>Intervocalic</b>	/pepe/ <pepe> “down”	/naṭap/ <na-thap> 2S.HANDS(8). FUTIRR-touch	/kutul/ <kutul> “curly”	/taṭa/ <tharta> “rat sp.”	/kaṅaci/ <kangatji> “mother’s country”	/nukunu/ <nukunu> “he, him”
	/bebe/ <bebe> “vomit”	/ṭaḍap/ <tha-dhap> 2S.POKE(19). FUTIRR-shut	/tiduk/ <tiduk> “behind”	/maḍa/ <marda> “stomach”		/nigunu/ <nigunu> “she, her”

(extract from 5.5.1 above)

Intervocalically, all but palatal obstruents have well-attested contrastive pairs, though for dental voiceless /d̥/ we must turn to morpheme boundary forms such as *tha-dhap* “shut it!”. In most cases these maintain quite consistent pronunciation differences, at least in careful speech: voiced alternants maintain voicing throughout, voiceless alternants cease voicing during part or all of the closure. In addition, as mentioned above, at the dental and velar positions voiced alternants are usually distinguished by frication.

Aside from palatals, I have also noted some variability in the production of the dental voicing contrast – which is only attested intervocalically. The strongest attested case for a minimal dental pair are the (semantically similar) verb roots *-thap* “touch” and *-dhap* “shut”, though even these are not strongly contrastive in the context of the verbal word, since they usually take different classifiers (§8.2):



(5.5.1) kardu **dam**-ngintha-**dhap**=wurran  
 PERS 3S.**POKE(19)**-DU.FEM-**shut**=GO(6).SER  
*the two of them are closing (the door)* (MK, PSE)

(5.5.2) **mam**-ngintha-**thap**=dim  
 3S.**HANDS(8)**-DU.FEM-**touch**=SIT(1).SER  
*the two of them are touching it* (JL, PSE)

My MKK careful speech data includes extensive sampling of this pair, and shows that the contrast is not categorical for younger speakers. Intervocally, these morphemes overlap significantly in [d̥] and [d̄] pronunciations, but differ in that only the voiced alternant can be deleted altogether (see also §4.7.5), while only the voiceless alternant has the potential to be realized as [t̥]. Table 5.5.2. shows the token counts for each morpheme taking the various dental obstruent realisations in intervocalic tokens. These tokens are drawn from 22 speakers, with mostly one token each, but some with two tokens. Where speakers produced two tokens they sometimes varied their pronunciation, e.g. between *-thap* → [d̄ap] ~ [d̥ap]:

	[∅]	[d̄]	[d̥]	[t̥]	(TOTAL)
<i>-thap</i> "touch"	-	4	8	17	(29)
<i>-dhap</i> "shut"	4	14	9	1	(28)

**Table 5.5.2 Post-vocalic pronunciations of *-thap* and *-dhap***

The phonetic realisations of these morphemes have different distributions, but are not categorically distinct. In Chapter 8 we will see that MKK also has a complex and overlapping distribution of realisations for peripheral obstruents (i.e. the bilabials and velars). Unfortunately, comparable observations regarding voicing contrasts in standard MP are prevented by the fact that most of the available careful speech data (i.e. Butcher 1990) is elicited from a written wordlist, in which the orthography used may tend to reify any voicing contrasts that are otherwise ambivalent.

### 5.5.5 Post-nasal neutralisation

	<b>Bilabial</b>	<b>Dental</b>	<b>Alveolar</b>	<b>Retroflex</b>	<b>Palatal</b>	<b>Velar</b>
<b>Post-nasal</b>	/banpak/ [banbak] <ban-pak> 3S.17-put	/maṅṅap/ [maṅṅap] <mam-thap> 3S.HANDS(8). NFUT-touch	/manta/ [manda] <manta> “near”	/maṅṅal/ [maṅṅal] <mam-rtarl> 3S.HANDS(8). NFUT-chop	/naŋci/ [naŋci] <nantji> “thing”	/cimkampa/ [cimgamba] <tjim-kampa> 2S.SIT(1).NFUT- laugh
	-	/ṭaṅṅap/ [ṭaṅṅap] <tham-dhap> 2S.POKE(19). NFUT-shut	-	-	-	/damguḍuk/ [damguḍuk] <dam-gurduk> 2S.13.NFUT- drink

(extract from 5.5.1 above)

In post-nasal positions obstruent voicing is effectively neutralized, because most obstruent tokens are phonetically voiced, even if some may be underlyingly voiceless (see also §5.9.3). This is revealed at morpheme boundaries involving an obstruent that would be voiceless in other environments (e.g. *ba-rtal-nu* [baṭal:u] “he will chop it” vs *bangam-rtal* → *bangarntal* [ˈbaŋaṅṅal] “he chopped (it)”). Curiously, Street also claims a voicing neutralization in this position, but in the opposite direction, with all post-nasal stops given a voiceless realisation (Street & Mollinjin, 1981, pp. 211–212). Street’s native-speaker collaborator, Gregory Mollinjin, indeed produces mostly voiceless post-nasal stops in a wordlist recording (Butcher 1990), though it is hard to discount the effect of the spelling system used in the wordlist from which he is reading. All other speakers for whom recordings are available strongly favour post-nasal voicing.

### 5.6 Long consonants

There is some mystery surrounding differences in the length of consonants at the boundary between first and second syllables, i.e. CVCV(C). In some words with first-syllable stress, the consonant in this position is unusually long, and Street further attests some cases where this length is the contrastive basis of minimal pairs. Most of the consonants for which this is attested are sonorants – /l/, /n/,

/ŋ/, /p/ and /m/ – but it is also attested for a voiced obstruent, /d/. The long consonants occur both at morpheme boundaries and intra-morphemically.

Street argues for a dual-segment “geminate” interpretation of the long consonants, partly as a matter of parsimony because MP phonotactics permits sonorants to appear both as syllable codas and syllable onsets, but also because he finds that native speakers produce the consonants in this manner when asked to syllabify the words (1981: 189–191). However, attempts I made to reproduce this intuitive syllabification failed;<sup>49</sup> and furthermore the syllable coda/onset interpretation does not account for lengthened /d/, which cannot be a syllable coda. If the long consonants occurred only at morpheme boundaries then the geminate interpretation would be convincing, but I do not find any good reason for treating the intra-morphemic instances as geminates other than for the sake of limiting the phonemic inventory. Nonetheless, in my practical orthography I follow Street in writing these as double-letters. Table 5.6.1 shows which consonants can be lengthened:

	<i>Intra-morphemic</i>	<i>Morpheme boundary (see 5.9.3 Rule (2))</i>
/l:/	balli “crab”	-
/n:/	ngun <b>nn</b> ungam 1PL.FEET(7)	than-rdal → /t̪ <b>ann</b> al/ “you stood it up”
/ŋ:/	-	<i>mam-rdarri dim</i> → /ma <b>ŋŋ</b> ari dim/ “he’s behind an object”
/p:/	-	<i>ngunungam-djung</i> → /ŋu <b>nnuŋa</b> ŋp̪uŋ/ “I sucked it out”
/m:/	-	bam-bat → /ba <b>mm</b> at/ “he fell”
/d:/	ngu <b>dd</b> ini 1PL.TURN(29).PST	-

**Table 5.6.1 Long consonants**

<sup>49</sup> Attempts I have made to reproduce the native-speaker syllabification reported by Street resulted in great inconsistency among speakers, and between syllabifications produced by the same speaker. Words with proposed geminates were syllabified both with and without apparent geminate consonants across syllable boundaries; but when I tested other words that have never been proposed to contain geminates, the same mixture of results was obtained.

I have not been able to locate archival recordings demonstrating the long consonants in MP, and therefore note this phonological feature as a topic for further research. I will here briefly outline the evidence that I have identified regarding this feature, and articulate some questions that must be answered if it is to be better understood. This is a topic of significant interest, since I am not aware of any other purely length-based sonorant contrasts in Australian languages – though there are various desert languages in which a plain nasal / prestopped nasal contrast *can* be realised in terms of length rather than stopping (Cottet et al., 2014; Simpson, 2002). On the other hand there *are* contrastive long/short oral stops in several northern Australian languages (Evans, 1995), and there is some evidence for a vestigial length contrast in sonorants (Butcher *p.c.*, 2014-01-20; Butcher, 1999).

Street (1987: 81–98) attests intramorphemic /n:/ and /l:/ in minimal pairs with their single alternants, producing singular/plural subject number contrasts in various verb classifiers:

ngun**n**ungam 1**s**.feet(7).NFUT  
 ngun**nn**ungam 1**pl**.feet(7).NFUT

pula 3**s**.31.FUT  
 pulla 3**pl**.31.FUT

For voiced stops he attests a slightly more complex contrast between long alveolar /d:/ and single retroflex /d/:

ngur**d**ini 1**s**.turn(29).PST  
 ngur**dd**ini 1**pl**.turn(29).PST

However, Walsh (1976: 325–383) does not attest these contrasts, giving syncretic single/plural forms with short consonants.

Street (2012) also attests some intramorphemic geminates that do not contrast with any similar word, e.g. *ku balli* “mud crab”. He does not provide measurements for closure timing, but reports that long consonants are clearly contrastive with their short counterparts, in that native speakers correct his pronunciation when he does not produce the appropriate length (Street *p.c.*, 10 May 2013).

The major limitation on further investigation of this feature is the lack of archival recordings demonstrating the verb classifier short/long contrasts in careful speech. However the archives do include clear evidence for certain words like *balli* having much longer intervocalic closures than others:

(5.6.1) *balli* → [bal:i] (lateral closure = 125ms)  
*mud crab* (PB, Butcher 1990)

(5.6.2) *pulu* → [pulu] (lateral closure = 68ms)  
*grey hair* (PB, Butcher 1990)

But as mentioned above, the long lateral closure in *balli* does not contrast with any form *\*bali*. Adding some confusion to the picture, the common intensifying adjective *ngalla* “big, important” appears in both archival recordings and my MKK data with a very long lateral closure (ex. 5.6.3); yet both Walsh (1976: 131) and Street (1981: 233) attest this word with a short /l/.

(5.6.3) *ngalla* → [ŋal:a] (lateral closure = 190ms)  
*big* (GM, Butcher 1990)

Neither does evidence from my MKK careful speech recordings provide clarity on the question of long consonants. In elicited verb conjugations, a few speakers do provide forms with intervocalic [n:] and [l:] distinguishing plural forms; but they are not altogether consistent in doing so, and there are other speakers who do not produce an obvious contrast. One possible explanation for such contradictory evidence is that MP has had a contrast between long and short

intervocalic consonants (or perhaps just sonorants), but that the contrast is now obsolescent and is losing its functional load for some or most speakers. However, I defer further investigation of this topic in the hope that further evidence from standard MP can be unearthed in archival recordings.

## 5.7 Word and syllable phonotactics

MP syllables can take the form CV, CVC or occasionally CVCC (Street & Mollinjin, 1981, p. 203). CVC syllables are closed by any sonorant, voiceless obstruent, or the approximant /j/. CVCC syllables are closed by any one of the liquids /l/, /ɭ/ or /r/, followed by one of the peripheral consonants /k/, /ŋ/ or /m/ (but not /p/).<sup>50</sup>

CV and CVC syllables can combine in any configuration in a word, but CVCC syllables are almost always word-final (or monosyllabic), except for in lexicalized reduplications.<sup>51</sup> Word-initial syllables can begin with any consonant that is not retroflex or the tap/trill /r/; where a syllable follows a closed syllable, it can begin with any consonant except /r/ and /ɭ/; syllables following open syllables have no restrictions. Table 5.7.1 exemplifies all the possible syllable structures for two-syllable words. Table 5.7.2 exemplifies the major types of consonant clusters that can occur at a syllable boundary.

Syllable sequence	Example
CV.CV	/pulu/ “grey hair”
CV.CVC	/mumak/ “sister”
CV.CVCC	/t̪urulk/ “foam”

<sup>50</sup> Street and Mollinjin (1981: 303-205) also list /jn/ and /jŋ/ as possible codas for CVCC syllables; however they do not specify examples, and I am not aware of any words of this form.

<sup>51</sup> MP has a large number of *lexicalized reduplications* – that is, monomorphemic words that are the lexicalized result of reduplication processes – in some cases the etymology is discernable (e.g. *mange batbat* “right hand” < *-bat* “to hit, strike”), while in others there is no attestation of the syllable functioning alone as a morpheme (e.g. *kalakkalak* “clouds”, \**kalak*).

CVC.CV	/ṭacpi/ “mouth”
CVC.CVC	/paldat/ “black mud”
CVC.CVCC	/kalkalk/ “midnight”
CVCC.CV ( <i>rare</i> )	/walmpu/ “testicles”
CVCC.CVCC (reduplicants only)	/purkpurk/ “small and numerous”

**Table 5.7.1 Examples of possible syllable structures for disyllabic words**

C2→ C1 ↓	C	N	L	/j/	/w/*
C	/kukpi/ “black-headed python”	/kikmun/ “wax”	-	-	/danṭarwatwat/ “he overshot (more than once)”
N	/ma-manpi-nu/ “I’ll help”	/kunmaṅkur/ “rainbow serpent”	/bamlaj/ “he spread it”	/demjirjir/ “(the water) is boiling”	/wuṅwuṅ/ “happiness at seeing one’s country”
L	/kalpa/ “reef”	/palṅun/ “woman”	/ṅullam-ac/ “we ate it”	/paljir/ “rock”	/tjepalwal/ “flat rock area”
/r/	/burbur/ “cold (temperature)”	/dirmu/ “painted design”	-	/ṅaṅ-ṭarjit/ “I was cautious”	/danṭarwat/ “he overshot”
/j/*	/bajbaje/ “female antelope kangaroo”	/dimjejma/ “he lacks (things)”	/kujlarr/ “inter-clan spear fight”	-	/nejwuj/ “sea wasp”

**Table 5.7.2 Examples of consonant clusters by phonological class. For a full set of possibilities by consonantal inventory, see Street and Mollinjin (1981: 205); though this does not list examples. C = voiceless obstruents; N = nasals; L = laterals**

**\* Approximants are rare in consonant clusters, and many of the examples that can be found result from lexicalized reduplication. /j/ is rare but permissible as the first element in consonant clusters; /w/ is rare but permissible as the second element of clusters.**

Street’s dictionary (2012) shows monosyllabic words to be quite rare, while the most common length for monomorphemic words is 2–3 syllables. Four-syllable monomorphemic words are also fairly common. Street attests just a few five-syllable monomorphemes, which are all lexicalized reduplications (e.g.

*'kaburrk 'kaburrk, mam* “weak from old age”), and none with more than five syllables. Once multi-morphemic verbs are taken into account, words of five or more syllables become quite common. The morphosyntactic possibilities of verbs allow us to synthesise words with 10–15 syllables or more; but even in naturally recorded speech words with around 10 syllables are occasionally found (see e.g. Blythe 2009: 130-134).

### 5.7.1 The bimoraic word minimum

As is commonly found in Australian languages (Baker, 2014) MP words must minimally be bimoraic. Monosyllabic words are either closed syllables (e.g. *tek* “black cockatoo”, *merrk* “moon”); or if open, are pronounced with a long vowel (e.g. *tje* “ear” [ce:]). Three of the MP noun classifiers are open monosyllables (*ku* ANIM, *mi* VEG and *da* PLACE/TIME), and each of these is pronounced with a long vowel and full syllable stress when used as a simple noun, but with a normal length vowel when used as a stressless, proclitic classifier:

(5.7.1) **mi**=kilern      bangam-rurt      → [mi'kileŋ 'baŋaŋdʊt]  
 VEG=green.plum    1S.STRIKE(14)-find  
*I found some green plums*

(5.7.2) **mi**    thantjin=tjim                      → [mi: 'tʰaŋtʃiŋtʃim]  
 VEG    2S.HAVE(22)=SIT(1).SER  
*do you have any food/tobacco?*

(5.7.3) **da**=Nangu      ngardi-dha      → [da'naŋu 'ŋaɖiɖa]  
 PLACE=[name]    1S.BE(4).PST-PST  
*I was at Nangu*





(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	<i>Serial verb</i>
<b>Classifier stem</b> (with fused subject) pers/num and TAM)	Object pron, Subj number, Reflexive/ reciprocal		Incorporated body part, Applicative	<b>Verb root</b>	Tense	Argument number, Adverbial		Classifier stem

Figure 5.8.1 The Murrinh Patha verb template (for details see §8.2)

All bound morphemes that occur before the verb root (i.e. classifier stems, object pronominals, number and reflexive markers and incorporated body parts) end with either an open syllable or a nasal coda. The vast majority of verb roots are either monosyllabic (e.g. *-ku* “fish”, *-purl* “wash”, *-batj* “carry”), disyllables (*-mantji* “carry over shoulder”, *-bugarl* “droop”), or longer forms that are clearly lexicalized reduplications, or compounds of body part and root (see §5.10.4). This is in contrast to nominals, which are usually two or more syllables even without derivations and compounding.

Verb roots can begin with /ɹ/ or retroflex obstruents, which is not the case with nominals (or any independent words). On the other hand there are only three attested verb roots that begin with alveolar obstruents /t/ or /d/; and in general the quantitative distribution of phonemes seems rather different between verbal and nominal roots – for example there are very few verb roots beginning with /c/ or /t̪/, both of which are common initials for nominals. It has been shown for other Australian languages (e.g. Warray [Harvey & Borowsky, 1999]) that noun and verb stems may have distinct phonological patterns.

MP does not have any clearly analysable morphemes that are made up of just a single consonant or vowel. However, there are a very few bound morphemes that commence with either a vowel or a consonant cluster, and therefore (given the MP syllable structure CV(C)(C)) do not consist of whole syllables. There are three known examples of verb roots that are vowel-initial: *-art* “get”, *-at* “stand” and *-atj* “eat”. These join the last syllable of the preceding morpheme by either taking its nasal coda as their onset (ex.5.8.2), or by merging into the vowel of a

preceding open syllable (see phonological alternation in §5.9.3)(exx 5.8.3 and 5.8.4).

(5.8.2) mangan-**art** → /'ma.ŋa.na.t/

1S.GRAB(9)-get  
*I got it*

(5.8.3) pibi-**at** → /pi.bet/

3PL.STAND(3).PST-stand  
*they (pl) stood*

(5.8.4) mere pulle-**atj**-tha → /me.ɬe pul.leç.ɬa/

NEG 3PL.SURFACE(26)-eat-PST  
*they (pl) didn't eat* (Street & Mollinjin, 1981, p. 216)

Bound morphemes beginning with nasal+obstruent clusters can be found in two object pronominals (-*mpa* 2S.IO and -*nku* 3PAUC.DO), and in one incorporated body part (-*ngka* “eye”). But a much larger set is found among the verb roots, of which there are at least fifty that begin with the sequence -*ngka*, in most cases clearly derived from the “eye” morpheme. In all cluster-onset morphemes the nasal that begins the cluster either attaches to a preceding open syllable (ex. 5.8.5), or is replaced by a nasal coda of the preceding morpheme (5.8.6) (see §5.9.4):

(5.8.5) nga-**mpa**-mut-nu → /ŋam.pa.mut.nu/

1S.POKE(19)-2S.IO-give-FUT  
*I'll give it to you*

(5.8.6) bam-**ngk**ardu → /bam.ka.du/ ~ /baŋ.ka.du/

1s.13-see  
*I saw it*

It is worth noting that the only consonant clusters we find in bound morpheme onsets are nasal-stop pairs, in particular: /ŋk/, /mp/, /nk/. The first two of these

possibilities, being homorganic, suggests that perhaps prenasalised stops might be interpreted here as single, complex segments. However the additional existence of the /nk/ onset undermines any analytical efficiencies that might have been gained by this approach. Street and Mollinjin (1981: 206) list other reasons why a prenasalised stop analysis would be inefficient – essentially, because all nasals and stops independently show a wide range of distributional possibilities.<sup>52</sup>

## 5.9 Morpho-phonological alternations

MP bound morphemes exhibit a range of phonological alternations, especially in verbs, where the most morphological synthesis occurs. I analyse these alternations using a Lexical Phonology approach (Kiparsky, 1982; Mohanan, 1986, 1995). I posit word-formation rules occurring on two levels, *stem* and *clitic-group*, avoiding the word “word” for either level, since neither seems to have a decisive hold on syntactic, semantic or intuitive wordiness. Some morphemes that attach on the outer clitic-group level are indeed very clitic-like (e.g. highly mobile adverbials, or serial verbs that could elsewhere serve as a verbal stem in their own right), but others are more akin to inflections (e.g. verbal tense and number markers). The two levels can be visualized using brackets to mark morphological scoping, and large brackets to mark the boundaries of stem and clitic-group domains:

$$[[ [ [ [MORPH] - [MORPH [MORPH]] ] ]_{STEM} - MORPH ] - MORPH ]_{CLITIC-GROUP}$$

I present here an example in which alternations occur at the boundary of verb classifier and verb root (§8.3) within the stem domain:

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<sup>52</sup> I attempted to further test the status of these nasal-stop clusters by eliciting words from native speakers in syllabified form. The results I obtained were wildly inconsistent between speakers, and in the production of the same speaker, so I abandoned this method.

- (5.9.1) [ [[pan]-[ru-[rup]]] <sub>STEM =wurran</sub> ] <sub>CLITIC-GROUP</sub> → /paŋtuɹup,wuran/  
 3s.23-RDP-expand=GO(6).SER  
*it's expanding*

The application of such “layered” morphological structures seems problematic for MP verbs, where morphological structure has been shown to be “templatic”, i.e. non-layered (§8.2.1). However I will argue that the MP verb comprises two syntactic units, headed by the classifier and root, which each has its own layering, and are joined together by a sort of compounding. When viewed as two units in this way, layering is mostly restored except for some anomalies which I explain as diachronic detritus of morphemes that have recently changed their status or function (§10.8).

Referring to morphemes within this structure, I will discuss their “lexical representation”, which for potentially independent morphemes is simply their unaffixed form, and for bound morphemes involves reverse-engineering from attested phonetic forms via what I judge to be the most plausible word-formation phonological processes.

The most complex range of alternations occurs within the stem, at the left edge of embedded verb roots and incorporated body parts. As we saw in the previous section (§5.8), all morphemes to the left of these end in vowels, or the nasals /m/ or /n/. Many of the embedded verbs and body parts alternate their initial consonant according to whether the preceding segment is a vowel or nasal:

- (5.9.2a) **mam-patha**  
 3S.DO(8).NFUT-**make**  
*he made/fixes it*

- (5.9.2b) **ma-watha-nu**  
 3S.DO(8).FUT-**make**-FUT  
*he will make/fix it*

Such alternations been dealt with in some detail by Walsh (1976: 69–104), though I diverge substantially from his analysis. A list of alternation rules is also provided by Street and Mollinjin (1981: 209–216), but without analysis. I will begin by discussing my procedure for distinguishing lexical representations and word-formation rules, then describe first a series of generalized phonological rules, followed by a series of lexically specified alternations.

The discussion of morpho-phonological alternations will become relevant to my analysis of MKK with regard to the emergence of phrasal verb structures (Chapter 9), which I will argue have been necessary as a means for extending the verb lexicon because the synthetic verb is too opaque in its structure. The lexically specified obstruent lenition alternation that I posit in this section will also be relevant to the discussion of sociophonetic obstruent lenition in MKK (Chapter 7). I have not noticed any systematic morpho-phonological changes in MKK with respect to SMP, though there are occasional instances when rules appear to be skipped. In ex.5.9.3 a regressive place assimilation rule would be expected to apply, but does not in this token. In ex.5.9.4 there is a lexically specific /m/-deletion predicted to apply, but in this token the /m/ is maintained.

(5.9.3) kanam-thudhutj → /kanam<sup>h</sup>tuduc/ (WD, PSE)  
 (SMP /kanan<sup>h</sup>tuduc/ by rule §5.9.4.3)

(5.9.4) kanam-werrerr → /kanamwerer/ (WD, PSE)  
 (SMP /kanawerer/ by §5.9.5.4, cf. Street 2012: -werrerr)

However because I have documented only a few instances of this phenomenon, and no systematic pattern is observed, I have not pursued this topic at this stage.

### 5.9.1 Identifying the lexical representations of verb roots

Most MP verb roots and incorporated body parts (IBPs) do not occur as independent word forms but only as bound morphemes (§8.3), and many in

their bound state appear with two alternate phonological forms. This sets a problem of defining which should be interpreted as the lexical representation for these morphemes.<sup>53</sup> I approach this problem based on the assumption that verb roots have been independent words at some point in the past (perhaps in the fairly recent past, §8.2.1, §9.2.2), and with a preference for selecting the historic independent form as the lexical representation wherever this can be integrated into a theory of synchronic word-formation.

In some cases the verb root has a closely related independent word playing some related function, such that these are obviously the same root being used in different roles. For example *kampa* “laugh” and *kumkum* “swim” are both bound verb roots and unbound action nominals (§9.5.1). Where such verb roots have alternate forms, I identify the form of the independent word as the lexical representation. For example between *-birl* ~ *-mirl* “to turn one’s head to look”, I identify *-birl* as the lexical representation, in view of the adjective *birlbirl* “watchful”. Similarly for the *-patha* ~ *-watha* “make/fix” example above, I select *-patha*, based on the presumably cognate adjective *patha* “good, functional”. In a similar vein, I also take into account apparently lexicalized reduplications. For example, *-rturup* ~ *-rurup* “expand” is not synchronically analyzable, but looks very likely to have been a reduplication of *\*rup*, which according to a widespread asymmetrical reduplication found in MP would reduplicate to *-rurup* (Street, 1980). Some of these interpretations are also supported by phonetic variation in MP, in particular the lenition variable that produces /p/ → [w] on stressed syllable onsets for various words, including the adjective *patha* (§7.4.4).

In my interpretation of *-patha* and several other comparable roots, I diverge from Walsh (1976: 70–72), who interprets *-watha* to be the lexical representation, based on the argument that this requires a simpler set of word-formation processes. Indeed, my analysis *does* require a greater number of rules

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<sup>53</sup> An alternative analysis would be to posit lexical representations that are *underspecified* for manner of articulation (Steriade, 1995). However this avenue will not be pursued here.

than Walsh's, and a series of lexically-specified alternations, with both lenition (e.g. /p/ → /w/) and fortition (e.g. /w/ → /p/) processes posited (§5.9.5.1 and §5.9.4.1 respectively). However, I do not regard the minimalisation of word-formation rules as a high priority in itself – especially given that we do not know to what extent these rules are actively deployed in cognitive speech processes, or whether they are really historical processes calcified in the synchronic lexicon. That is to say, although in our analysis we can break down *mam-patha* and *ma-watha-nu* into productive morphemic units, we do not know to what extent this compositionality occurs in the minds of speakers, or whether entire verb forms are stored in the lexicon. There is strong evidence that the mental lexicon does in some circumstances store redundant, non-minimal units (Bybee & Thompson, 1997; Jackendoff, 1997).

There are many cases where there is no independent word form to which a bound morpheme can be traced, and in these cases I seek evidence in general MP word phonotactics, on the basis that some synchronically simplex words are likely to have been shaped by historic word-formation processes. For example, *-riwak* ~ *-rtiwak* “follow”<sup>54</sup> alternants occur following a vowel and a nasal respectively, and there is no independent word form with which these are cognate. The two possible word-formation processes we must consider are:

(1) *-tjwak* → *-jwak* / V \_\_

(2) *-jwak* → *-tjwak* / N \_\_

MP does have numerous words with /Vt/ or /Vd/ sequences, including examples in the same environment, i.e. at morpheme boundaries at the onset of a stressed syllable (e.g. *ma-rdarri-nu* “I’ll be behind it”, *ki-rtertpe-nukun* “(his hair) might stand on end” [Street 2012]). Thus this cannot be posited as a general phonological rule, though it might still be a lexically-specified alternation for a

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<sup>54</sup> For this morpheme it is difficult to establish whether the stop-initial alternant should be identified as /d/ or /t/, since it occurs only post-nasally, and in this environment both stop types are usually voiced. In the absence of further evidence I tentatively accept Street's (2012) listing of the alternant as *-rtiwak*.



verb root *-rtiwak*. On the other hand, there are no /N.ɿ/ sequences in MP whatsoever, which we might attribute to a general fortition rule such as (2). The lack of any independent cognate form means I have no evidence as to the actual historical/phonetic process involved here, but in the absence of such evidence I posit a general phonological rule rather than a lexically-specified alternation.<sup>55</sup>

### 5.9.2 Stem and clitic-group morphemes

The *stem* domain is for most word classes simply the lexical root, but for verbs the stem is a composite sequence including verb classifier, root, and any intervening morphemes (§8.2). The stem is the same domain in which primary stress assignment occurs (§7.10), and is also the domain to which the bimoraic word minimum applies (§5.7.1). All other bound morphology is in the outer domain, the *clitic group*. Some of these outer morphemes are indeed syntactically mobile clitics (§8.4.7), but others are syntactically bound affixes, though both share the property of falling outside the primary stress assignment domain. The two domains bear some similarity to the “root” and “word” domains posited for Australian languages by Baker and Harvey (2003). However the MP stem domain is unlike Baker and Harvey’s “root” in that (a) it encompasses some productive, semantically transparent morphology; (b) its foot structure is not identical to that of a simplex word.

I list first general phonological rules that occur in any domain, then rules that occur only in stem formation, then lexically specified alternations, which also occur only in the stem domain. It is cross-linguistically expected that lexically specified alternations should occur only in the inner domain (Shwayder, 2013, p. 7).

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<sup>55</sup> Another problematic case is *-ruy* ~ *-rtuy* “arrive”. This is usually unstressed, on which basis it does not qualify for the lenition rule (§5.9.5.1), and might therefore be assigned the lexical representation *-ruy*. However the *-rtuy* form occurs in the reduplication *-rurtuy*, and neither does this qualify for the fortition rule (§5.9.3.2).

When I state here that certain alternations do not occur in clitic-group formation, in fact I mean only that they do not occur *consistently* in the outer domain, and usually do not occur in careful speech. But in fact some MP clitics variably exhibit the alternations usually found only at stem-internal boundaries. Examples 5.9.5–6 show a clitic of imminent aspect, =warda, variably triggering and not triggering the rule Progressive /w/-fortition (§5.9.4.1):

(5.9.5) ngay-ka thungku thungku ngamam=**warda** → /ŋamamwada/  
 1S-TOP FIRE FIRE 1S.SAY(34)=IMM  
*I said, "Fire! Fire!"* (AN, Blythe 2011-08-28)

(5.9.6) mere ngerrem-nham=**warda** nganki ne? → /ŋerenŋampada/  
 NEG 1PL.21-fear=IMM 1PL RIGHT?  
*we weren't scared, eh?* (KB, Walsh 1986 Tape 10)

In my MKK data I find many more examples of rules applying to what would otherwise be considered clitics. These are often triggered by serial verbs (exx 5.9.7–8), which I consider among other evidence that serial verbs are evolving into affixes, and may eventually join the stem.

(5.9.7) think mam=**dim** → /mandim/<sup>56</sup>  
 think 3S.DO(34)=SIT(1).SER  
*he's thinking* (OB, PSE)

(5.9.8) siksak mam=**wurran** → /mampuran/  
 zigzag 3S.DO(34)=GO(6).SER  
*it (a river) goes in a zig-zag shape* (DP, PSE)

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<sup>56</sup> This transformation does not precisely fit any of Street's rules, but is very similar to the place assimilations in rules 4–7.

The variable application of rules at the right margin of the verb is discussed in §8.5, but in this section I treat the stem/clitic-group division as if it were categorical.

### 5.9.3 General phonological rules

I list first the “general phonological rules”, that is to say, alternations that occur consistently when morphemes are combined either within the stem or the clitic-group. These alternations avoid sequences that are never found within monomorphemic words either, so they can be considered general phonotactic constraints. Data where not otherwise indicated is from Street’s examples (1981, 2012).

#### 5.9.3.1 Progressive devoicing in obstruent sequence

[+VOICE +OBSTRUENT] → [-VOICE] / [-VOICE] \_

Stem:

*ba-gat-gat-nu* → /bagatkatnu/ “I’ll eat until I’m satisfied”

Clitic-group:

*ngurdana-rturturt-dha* → /ŋuɖanaɹuɹuɹta/ “I was growing up” (also §5.9.5.1)

Within stems the only opportunities for this alternation are root reduplications (since roots are the only stem morphemes ending in obstruents), but it is notable that intramorphemically there are no [-VOICE][+VOICE] obstruent sequences, suggesting a generalized phonological rule.<sup>57</sup>

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<sup>57</sup> There are a few exceptions to this rule, all of which are bilabial obstruents in reduplicated form: *-bat-bat*, *-matj-batj*, *-bek-bek* (Street 2012).

### 5.9.3.2 /ɹ/ post-consonantal fortition<sup>58</sup>

/ɹ/ → [+APICAL +OBSTRUENT] / [+CONS] \_\_

Stem:

*pubana-we-rurutj-rurutj* → /pubanawe.ɹu.ɹuctɹu.ɹuc/ “they will chop the tops off anthills”

*pan-rurup* → /paɹtɹurup/ “it’s expanding” (also §5.9.5.5)

Clitic-group:

*trak-re* → /t.ɹakte/ “by truck”

*thakuny-re* → /t.ɹakunde/ “by way of the left”

*tju palyirr-re* → /cu paljirde/ “with a stone”

*dam-warl-re* → /dampaɹde/ “when he speared it”

The resulting obstruent is voiced following a sonorant, and where the preceding segment is apical, place assimilation occurs as described in §5.9.5.5. Note that /ɹ/ is never word-initial; if any independent words have /ɹ/-initial etymons (see §5.9.4.1) then these have fortited to /t/. In the cases of *-rurup* and *-rurutj*, I presume that the synchronic roots are a lexicalized reduplicants of an older *\*-rup* and *\*-rutj*.

### 5.9.3.3 /n/ lateralization<sup>59</sup>

/n/ → [+LATERAL] / [+LATERAL] \_\_

Clitic-group:

*ba-rtal-rtal-nu* → /ba.ɹaɹtallu/ “I’ll chop it” (DP, PSE)

*nga-warl-nu* → /ɹawaɹɹu/ “I’ll spear it” (Walsh 1986, Tape 01)

*ne-rel-nime* → /ni.ɹellime/ “all of you will sing” (AB, VPE)

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<sup>58</sup> Walsh rule 5; Street rule 23.

<sup>59</sup> Not attested by Walsh or Street. However it is attested in the earliest documentation of MP grammar, by Brother Flynn (1950, p. 13).

This “rule” is not categorical (e.g. /baɟaɭtallu/ ~ /baɟaɭtalnu/), but fairly prevalent in SMP, and quite dominant in MKK. (In MKK there are additional examples of lateralisation affecting /r/ and /d/.) Examples for this are from my MKK data, and from MP archives. Street does not attest this alternation, presumably because it is not categorical.

All examples I have for this apply to clitic-group affixes, rather than the stem, where there are no [+LATERAL]/n/ sequences at morpheme boundaries. But since these sequences never occur intra-morphemically either, I assume it to be a generalised phonological process.

#### 5.9.4 Stem formation rules

I list here rules that occur consistently, but only in stem formation and not in the clitic-group.

##### 5.9.4.1 Progressive /w/ fortition<sup>60</sup>

/w/ → /p/ / [NASAL] \_

*dam-warl* → /dampal/ “he shot him”

*dam-wiye-wiye* → /dampijewije/ “he ruins it”

For /j/, fortition is lexically specified, but may occur after any consonant (see §5.9.5.1). For /ɹ/, fortition applies after any consonant and in any domain (§5.9.3.2). Progressive /w/ fortition is applied categorically within the stem domain, but we have seen above that it is also variably applied to clitics such as =warda IMM, and =wurrān GO(6).SER (exx.5.9.6–8), suggesting some blurring of domain boundaries. However there are other

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<sup>60</sup> Walsh rules 1–3, 10; Street rules 10–15.

clitics such as *-wa* EMPH, =*wangu* DIR. to which I have never seen fortition applied.

There are various motivations for considering the roots exemplified here to have approximants rather than obstruents in their lexical representations. A lexical obstruent would require a post-vocalic lenition process to account for forms such as *tha-parl* → /'t̪awəl/ “shoot it!” etc., but in the case of *-warl*, this does not fit the stressed-syllable requirement of obstruent lenitions (§5.9.5.1). In the case of *-wiye*, it is cognate with an independent adjective *wiye* “bad”.

#### 5.9.4.2 Voiced obstruent nasalization (bilabial, apical and palatal only)<sup>61</sup>

[+VOICED +OBSTRUENT {BILABIAL, APICAL, PALATAL}] → [+NASAL] / [+NASAL] \_

*mangan-bert* → /maŋan**me**t/ “I collected him”

*bam-bat* → /bamm**a**t/ “he fell”

*mem-daladala* → /mennaladala/ “I’m unable to do it” (also §5.9.4.3)

*mam-rdarri dim* → /maŋ**ɲ**ari dim/ “he’s behind an object”<sup>62</sup>

*than-rdal* → /t̪ann**a**l/ “you stood it up” (also §5.9.5.3)

*ngunungam-djung* → /ŋunun**ɲ**ɲuŋ/ “I sucked it out”

Street does not include the voiced palatal /ɟ/ in this rule, but his dictionary attests its application for *-djung* as cited above. The root *-djegdjek* “play” does *not* follow this alternation in my data, though it is difficult to establish a clear lexical representation for this as its

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<sup>61</sup> Walsh rules 7–9, 11; Street rules 1, 4, 5.

<sup>62</sup> Where I posit these geminate nasals, Street sometimes attests a single nasal segment. I have argued that geminate sonorants are rather variably realized, only sometimes being pronounced with noticeable lengthening (§5.6), which I take to be the explanation for this discrepancy.

realisations vary widely.<sup>63</sup> There is insufficient data for /ɟ/, which we have observed to be a marginal phoneme, to permit further investigation of its alternation patterns.

Evidence of non-application on dental and velar obstruents can be found in verb roots such as *-dhap* “shut” and *-gurduk* “drink”. There is no relevant evidence with regards to applicability in the outer clitic-group, since there are no morphemes in this domain with initial /b/, /d/, /d/ or /ɟ/.

#### 5.9.4.3 Regressive coronal place assimilation of /m/<sup>64</sup>

/m/ → [CORONAL] / \_\_ [CORONAL +OBSTRUENT]

*ngem-tettje* → /ŋentetce/ “I’m alert”

*mam-rdarri dim* → /manŋari dim/ “he’s behind an object” (also §5.9.4.2)

*pam-rtum* → /paŋtʊm/ “she dried herself”

*ngam-riwak* → /ŋanɽiwak/ “I followed him” (also §5.9.3.2)

*ngam-thu* → /ŋanɽtu/ “I blew the didgeridoo”

*ngam-dhap* → /ŋanɽdap/ “I closed it”

*pirrim-tjirrngka* → /piriɽɽirŋka/ “it’s drizzling”

*ngunungam-djung* → /ŋunuŋanɽuŋ/ “I sucked it out” (also Rule 2)

For coronal obstruents this is a stem-level rule; but for the approximant /j/ there is instead a lexically specified alternation §5.9.5.2. Evidence of non-applicability beyond the stem can be seen in the addition of the clitic-group tense marker *-dha*: *kani-kum-kum-dha* → /kanikumkumɽa/ “he was swimming”.

<sup>63</sup> There are many instances of this in my MKK careful speech data, with bound forms varying between /Nɽegɽek/ ~ /Nɽejek/ ~ /Njegɽek/ ~ /Njeɽek/ ~ /Vɽejek/ ~ /Vjeɽek/, and independent forms /cegɽek/ ~ /ceɽek/ ~ /cejek/. Street (1980: 2) attests a bound root /ɽekɽek/.

<sup>64</sup> Walsh rules 2, 4; Street rules 2, 6, 7, 15, 19.

#### 5.9.4.4 Progressive voicing in nasal-obstruent sequence<sup>65</sup>

[-VOICE +OBSTRUENT] → [+VOICE] / [NASAL] \_\_

*nam-thap* → /naṅḍap/ “close it!”

This alternation is not quite categorical, but usually applies. Inasmuch as it is not categorical it can be interpreted as a phonetic surface rule (this is the view taken by Walsh 1976, p. 36). Curiously, Street attests the inverse alternation, claiming that underlying voiced obstruents are devoiced after nasals (1981: 211-212). But in my data obstruents are almost always voiced after nasals, no matter what their underlying voicing.

Non-application in the clitic group can be seen with the topic marker *-ka*:  
*bamam-ka* → /bamamka/ “white-TOPIC”.

#### 5.9.4.5 Vowel sequence reduction<sup>66</sup>

[VOWEL]-[VOWEL] → [VOWEL]

(a) /V<sub>1</sub>/-/V<sub>2</sub>/ → /V<sub>1</sub>/

*mere pulle-atj-tha* → /me.ɛ pulleçta/ “they didn’t eat”

except (b) /i/-/a/ → /e/

*pibi-at* → /pibet/ “they stood”

This alternation is quite rare, as there are only a handful of verb roots that are vowel-initial (§5.8). There is no relevant evidence for clitic-group formation.

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<sup>65</sup> Attested by Walsh (p. 36) as a phonetic rule; not attested by Street.

<sup>66</sup> Not attested by Walsh; Street rule 22.



#### 5.9.4.6 Dual-nasal consonant cluster reduction<sup>67</sup>

[+NASAL<sub>1</sub>] - [+NASAL<sub>2</sub>] - [+OBSTRUENT<sub>3</sub>]

→ [+NASAL<sub>1</sub>] - [+OBSTRUENT<sub>3</sub>] ~ [+NASAL<sub>2</sub>] - [+OBSTRUENT<sub>3</sub>]

*pumam-ngkarlay* → /pumamka[aj]/ ~ /pumaŋka[aj]/ “they waved”

*ngirrangan-ngke* → /ŋiraŋanke/ ~ /ŋiraŋaŋke/ “I was jealous”

Some verb roots and the incorporated body part *-ngka* “eye” begin with the consonant cluster /ŋk/ (§5.8). When these follow a vowel the two consonants syllabify as coda and onset respectively; but when they follow a consonant (always in fact a nasal), the potential 3-consonant sequence cannot be syllabified in MP (§5.7)<sup>68</sup>, and this is resolved by deleting the first or second nasal.<sup>69</sup>

Note that these roots could be interpreted as beginning with a single prenasalised stop segment. This would fit better with the general pattern of roots beginning with a simple consonant onset, and replace this word-formation rules with an allophonic rule for /ŋk/, realized as a prenasalised stop intervocalically, and as a plain obstruent [k] elsewhere. It would also explain etymological relations such as *-ngkabirr* “argue” (bound root) vs *kabirrngka* “argue” (independent coverb). On the other hand this analysis adds a somewhat redundant phoneme to the inventory, in which /ŋ/ and /k/ are both independent phonemes and can occur in sequence. Perhaps MP has a historical stratum of prenasalised velar stops,

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<sup>67</sup> Not listed among Walsh’s alternations; Street rule 21.

<sup>68</sup> Note that three-consonant clusters are not disallowed as a rule. MP has [LIQUID][PERIPHERAL] syllable coda clusters, which can be followed by a third consonant word-internally: *purrrkpurrrk* “small and numerous”, *melkmelkthay* “royal spoonbill”.

<sup>69</sup> Presumably there is a similar alternation when the second-singular indirect object *-mpa* follows a verb classifier ending with a different nasal, such as *ban* 1s17. But I have no data on this.

of which the synchronic residue can be found in the unusual presence of /ŋk/ cluster onsets in some bound roots.

### 5.9.5 Lexically specified alternations

I here list lexically specified alternations, all of which occur in (verbal) stem formation. I do not attempt to quantify whether the application or non-application of these alternation is more common, but instead simply give examples of application and non-application for each.

#### 5.9.5.1 Progressive voiceless obstruent lenition on stressed syllable<sup>70</sup>

[-VOICED +OBSTRUENT {BILABIAL, APICAL, PALATAL}] → [+APPROXIMANT]

ma-**patha**-nu → /ma'wəʔanu/ “I’ll make it”

ngurdu-**rturturt**-nu → /ŋuɖu'ɽuʔuʔuʔnu/ “I’ll grow it”

ngam-na-**tjepup** → /ŋamna'jepup/ “I heard about him”

Non-application: -*parrang*, -*rterte*, -*tjirri*

Walsh (1976: 70-72) interprets these roots as having lexical approximants (e.g. -*watha*), because this avoids the need for a lexically specified morphophonemic alternation, and allows all the bilabial and retroflex alternations to be covered by general fortition rules (§5.9.3.2, §5.9.4.1). As outlined above, I diverge from Walsh here because I take into account cognate independent forms such as *patha* “good”, and the fact that -*rturturt* “grow” appears to be a lexicalized reduplication of \*-*rturt*, not \*-*rurt* (similarly for the synchronic reduplicant -*rtartal*, simplex -*rtal* “chop”). For -*tjepup* “hear”, the incorporated body part -*tje* “ear”, and several related roots, I analyse an obstruent in the underlying form in view of the independent nominal *tje* “ear”.

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<sup>70</sup> Partial re-analysis of Walsh rules 1, 10; Street rules 10–15.

The same lenition pattern can apply among independent words, but without phonologisation (i.e. likely to disappear when hyperarticulated), where they occur in highly routinized combinations such as *le + patha* “mood + good = happy”:

(5.9.9) kardu epi=nimin kardi-dha **le** **patha**  
PERS happy=CONTR 3S.BE(4).PST-PST mood good  
*they were happy then, happy* (KB, Walsh 1986 Tape 10)  
→ [le'wata]

(5.9.10) nantji=ngadha pi-wurrpurk-neme-nu  
THING=INFR 1INCL.SIT(1).FUT-dance-PC.MASC-FUT  
**le** **patha** pi-neme-nu  
mood good 1INCL.SIT(1).FUT-PAUC.M-FUT  
*let's have a corroborree so we can be happy* (LK, 2000-11-10)  
→ [le'wata]

Further evidence for “univerbation” (Lipka, 1990) in this combination can be seen in the fact that *le* is pronounced here with a short /e/, rather than the long vowel that characterizes its use as an independent word (§5.7.1):

(5.9.11) tju kuy=de-ngatha le pardi-dha → ['le: ,paɖiɖa]  
WEAP fight=ITER-STILL mood 3S.BE(4).PST-PST  
*they still liked fighting* (SN, 2013-07-11)

Some roots might be analysed as having either an obstruent or an approximant in their lexical representation. For example *?-ribaj ~ ?-rtibay* “fornicate” has an independent form *tibaytibay* “adultery”, which could be explained as either a lenition of /t/ in the bound root form, or as fortition of /ɹ/ when it occurs initially in an independent word – which is not permitted in MP phonotactics.

There is no phonemic alternation of /k/, but note that it is phonetically lenited to [ɣ~ɥ~w] in the same environment, e.g. *panamka-kampa* → [panamgaɣamba]. Evidence for non-application of lenition in the clitic-group can be seen in the serial verb =*panam* 3PL.BE(4).SER.

#### 5.9.5.2 Progressive /j/ fortition<sup>71</sup>

[APPROXIMANT] → [OBSTRUENT] / {NASAL, OBSTRUENT} \_\_

*mim-yerr* → /mij~~n~~cer/ “she looked around” (also §5.9.4.3)

*mam-yit-yit* → /mamjit~~n~~cit/ “I’m holding it”

Non-application: *mam-yit* → /mam~~n~~jit/ “he’s holding it”

For /w/ and /ɹ/ similar fortitions apply as general rules (§5.9.3.2, §5.9.4.1).

I interpret *-yerr* to be the lexical representation rather than *-tjerr*, because the latter would then demand a progressive lenition rule (§5.9.5.1), but being a monosyllabic root it does not have the required syllable stress. There are only a few examples of the alternation occurring after obstruents; Street (1981: 204) lists [OBSTRUENT]/j/ as a permissible consonant sequence, but I am not aware of any examples. Non-application in the clitic-group is evidenced in discursive tags =*yu*, =*ya* (e.g. *Belyuen=yu* “Belyuen”, *rut=yu* “road”).

#### 5.9.5.3 /mj/ place assimilation<sup>72</sup>

/m/ → /n/ / \_\_ /j/

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<sup>71</sup> Walsh rules 2–3, Street rules 10–15.

<sup>72</sup> Walsh rule 2, Street rule 6.

*mim-yerr* → /miŋ<sub>ɹ</sub>er/ “she looked around”

Non-application: *mam-yit* → /mamj<sub>ɪ</sub>t/ “he’s holding it”

Under the influence of /j/ this alternation is lexically specified, whereas under the influence of coronal obstruents it is a rule (§5.9.4.3). Non-application in the clitic-group is evidenced in discursive tags =*yu*, =*ya*.

#### 5.9.5.4 /m/-coda deletion<sup>73</sup>

/m/ → Ø / \_ [+CONS]

*nganam-rdi* → /ŋana<sub>ɹ</sub>d<sub>ɪ</sub>/ “I entered”

*ngunungam-lili* → /ŋunuŋal<sub>ɪ</sub>l<sub>ɪ</sub>/ “I’m walking”

*nganam-wup* → /ŋana<sub>w</sub>u<sub>p</sub>/ “I sat down”

Non-application: *mam-rdarri* (see §5.9.4.3), *bam-lang* → /bamlan<sub>ɹ</sub>/, *dam-warl* (see §5.9.4.1).

Non-application in the clitic-group is evidenced in *ngunungam=wurran* 1S.FEET(7)=GO(6).SER.

#### 5.9.5.5 Retroflex/alveolar assimilation

There are no retroflex/alveolar clusters in MP, and where there is potential for one to arise in stem formation, one of three alternations satisfies the phonotactic constraint. Street implies that the three options here are lexically specified, although the subtlety of the apical/retroflex contrast makes it difficult to rule out variability between options (a) and (b).

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<sup>73</sup> Not attested by Walsh; Street’s rules 4, 11, 12, 17.

(a) *Progressive place assimilation of apical obstruent*<sup>74</sup>

[RETROFLEX] → [ALVEOLAR] / [ALVEOLAR] \_\_

*pan-rtal* → /pantal/ “she cut it”

*than-rdal* → /t̪anna/ “you stood it up” (also §5.9.4.3)

*pan-riwu* → /pandiwu/ “he counted” (also §5.9.3.2)

(b) *Regressive place assimilation of apical nasal*<sup>75</sup>

[ALVEOLAR +NASAL] → [RETROFLEX] / \_\_ [RETROFLEX]

*wurdan-rlart* → /wuɖaŋlaɾ/ “it flowed fast”

*pan-rurup* → /paŋtuɾup/ “it’s expanding” (also §5.9.3.2)

(c) *Epenthesis*<sup>76</sup>

[ALVEOLAR]-[RETROFLEX] → [ALVEOLAR]-/nV/-[RETROFLEX]

*kandjin-rdang* → /kaŋjinnadaŋ/ “he has it stuck in him”

*ngurdan-rlerl* → /ŋuɖannele/ “I rolled it over”

This application of epenthesis (or indeed any epenthetic process) is not attested in Nordlinger’s data (Nordlinger *p.c.*). There may be an alternative explanation of these forms as containing unusual instances of the 3s indirect object marker *-na*.

## 5.10 Word stress<sup>77</sup>

This section does not offer a comprehensive analysis of MP word stress, but rather aims to establish some basic facts about stress assignment in multimorphemic MP verbs. However it seems preferable to contextualize these

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<sup>74</sup> Not attested by Walsh; Street rules 3, 5, 16.

<sup>75</sup> Not listed in Walsh or Street, though Street attests forms following this alternation in his dictionary.

<sup>76</sup> Not attested by Walsh; Street’s rules 5, 13, 14.

<sup>77</sup> This section is generally indebted to discussion with Eric Round.

main points within a tentative outline of MP stress in general, even if the data examined here is not sufficient to be comprehensive.

The two points that will have particular bearing on my discussion of MKK are:

- (1) MP stress is sensitive to morphology, and for multimorphemic verbs the primary lexical stress typically falls on the verb root if it is disyllabic. But if the root is monosyllabic then primary stress falls on a preceding morpheme. This may have a role in determining which verb roots can be used as coverbs in MKK (§9.3).
- (2) Morphemes to the right of the verb root are outside the *stem* domain in which primary stress is assigned in verbs. This motivates discussion of verbal suffix reduction and deletion in Chapter 10.

A further point of significant interest with respect to monomorphemic stress is that:

- (3) MP has unpredictable (i.e. lexically specified) stress for trisyllabic words, falling on either first or second syllables. This phenomenon is only briefly described here, but is of significant typological interest, and is projected as a topic for further research (with Juliet Stanton).

Lexical stress in MP has been analysed by Walsh (1976: 106–124), who identifies preferences that collaborate (or compete) to assign stress. There is no determinate ranking among these preferences, which in some cases results in words that have variable stress patterns due to conflict among preferences. I differ from Walsh in that he identifies only one level of stress, which can occur on multiple syllables in a word; by contrast I identify primary stress (which can occur only once in a word) and secondary stress (which can occur more than once). Street and Mollinjin (1981: 206–209) provide a list of attested stress patterns, without attempting to identify rules or preferences by which these are selected. Like Walsh, they claim that stress assignment is in some cases unpredictable, and presumably must be specified in the lexicon. Unlike Walsh,

they identify both primary and secondary stress – though I disagree with them on several of the stress assignments they list. It is difficult to compare our approaches on this matter, since both Walsh and Street, like all earlier grammatical descriptions of Australian languages, posit stress placement according to aural impressions, rather than acoustic analysis. Of course, the potential for acoustic analysis was quite limited before the computing revolution – but the implication is that earlier stress descriptions may need to be revisited (Bowern, Claire, Alpher, & Round, 2013; Round, 2009).

Lexically specified stress is highly unusual among Australian languages, and to the best of my knowledge has only previously been attested for Jingulu (Pensalfini 2003, cited Fletcher and Butcher, forthcoming: 31) and for Ndjébbana, where there are lexical contrasts based on “stressed” syllables – though these might also be interpreted as phonemic long vowels (McKay, 2000).

In this thesis I do not attempt to establish a thorough formal procedure assigning stress across different word types, though I hope that the groundwork is being laid. Rather I limit myself to recording empirical observations regarding word stress, and identifying issues for further investigation. I refer to metrical “feet”, assigning primary and secondary stress in the first syllables of “head” and “secondary” feet respectively, basing these assignments on peaks in pitch and intensity. The use of feet in the analysis is intended as a descriptive convenience, and does not represent any theoretical commitment regarding stress and foot structure (but see Martinez-Paricio & Kager, 2013).

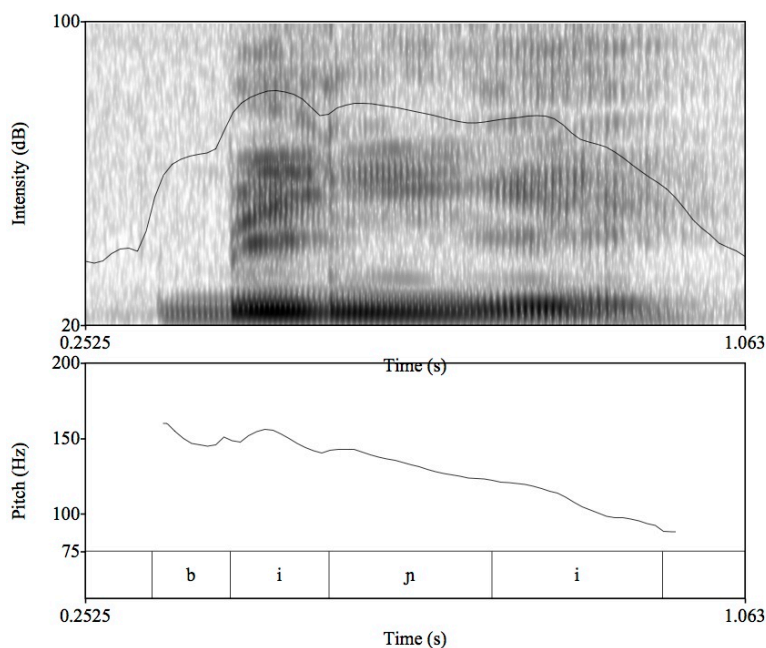
Another limitation of this brief foray into stress is that it examines only single-word citation forms, and does not investigate how this might differ from the same words found in phrases (Himmelman & Ladd, 2008; Gordon, 2011).



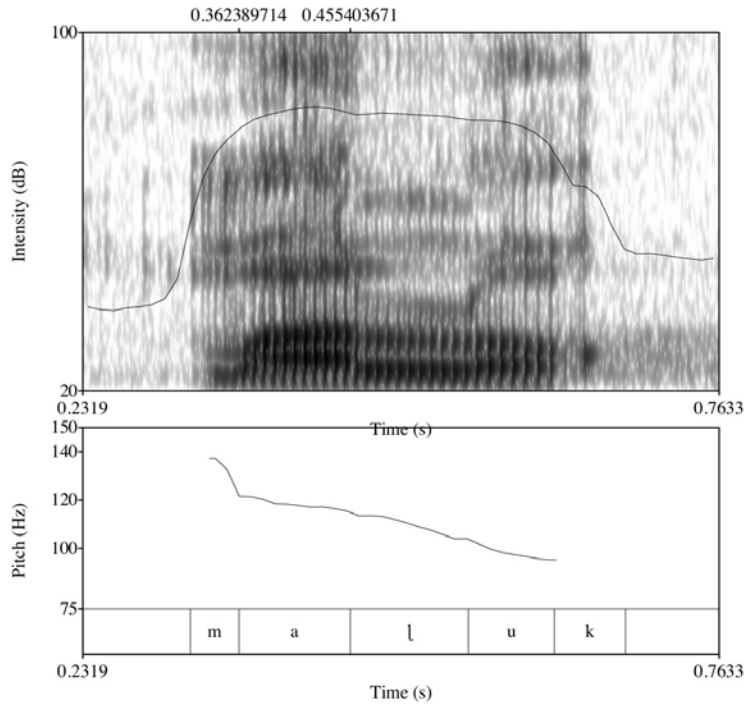
### 5.10.1 Phonetic realisation of stress

I establish stress correlates by observing acoustic features of disyllabic words in which I hear stress as falling clearly and consistently on the first syllable (with both Walsh and Street in agreement on this point). I use the acoustic features associated with the first syllable of disyllabic words to establish the location of stress on longer words.

F0 pitch, and to a lesser extent, acoustic intensity, realise syllabic stress in MP. Example 5.10.1–2 show disyllabic words in which the stressed first syllable has both higher pitch and greater intensity. I refer to this pitch high-point as a “pitch peak”; but note that the following unstressed syllable in some cases begins with a pitch that is just as high, but falls substantially within the syllable.

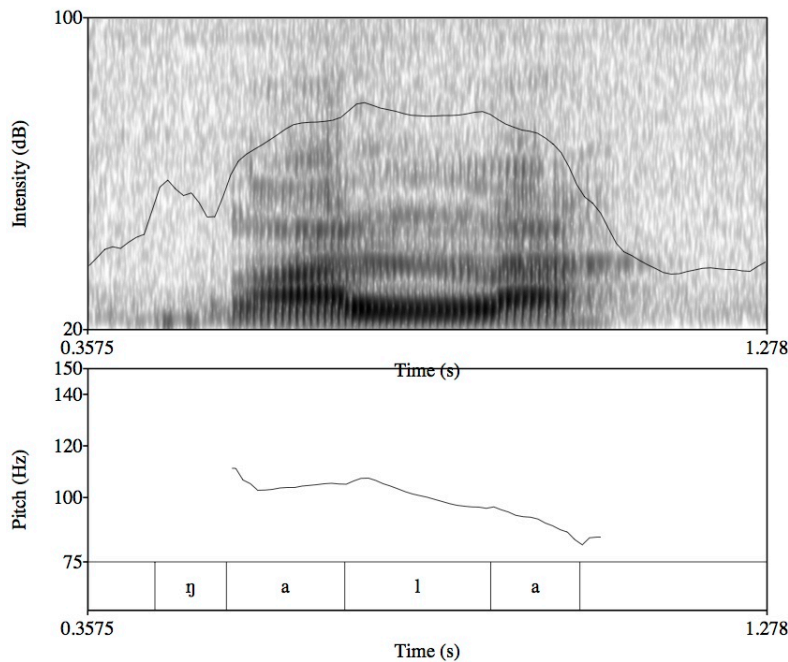


(5.10.1) *binyi* → ('bi ɲi)  
*alive* (GM, Butcher 1990)



(5.10.2) marluk → ('ma [uk]  
*didgeridoo* (JL, PSE)

I analyse these pitch/intensity peaks as being phonologically anchored to the first syllable, however there are also tokens where the pitch and/or intensity peaks in the onset of the second syllable (ex.5.10.2a). I regard this as a phonetic effect, similar to the rightwards-drift of pitch accent attested for Kayardild (Round 2009: 318):



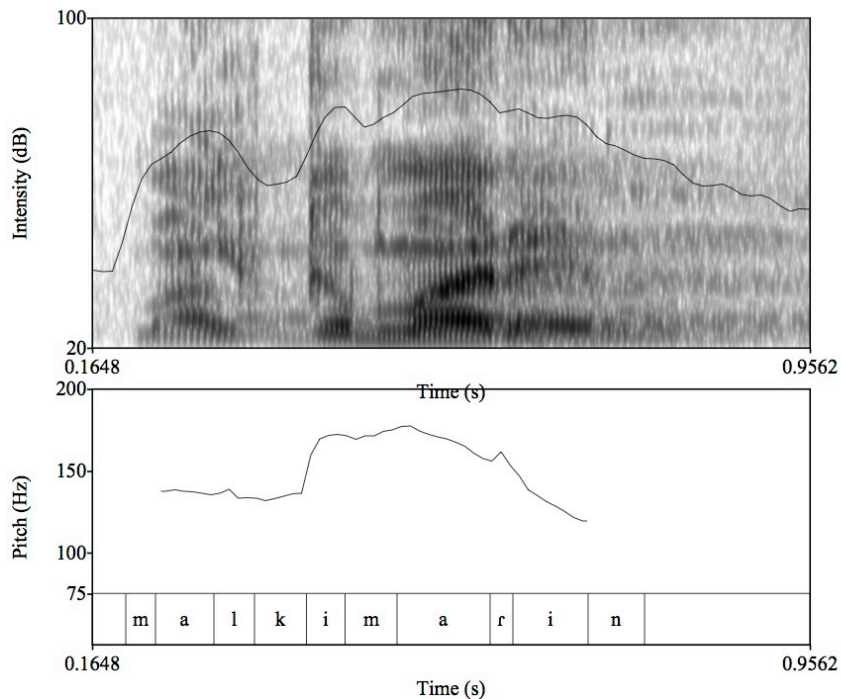
(5.10.2a) ngalla → ('ηa la)  
*big* (GM, Butcher 1990)

Vowel length and quality, on the other hand, play little or no role in signalling stress in MP. A preliminary study by Stanton (2013) finds only a slightly longer vowel duration in stressed as compared to unstressed syllables in trisyllabic words (8% longer for word-initial stress, 15% longer for second-syllable stress), and no consistent differences in vowel formants (for Kayardild cf. Round, 2012).

### 5.10.2 Monomorphemic lexical stress

The simplest illustrations of MP stress are two- and four-syllable monomorphemic words, which in both cases consistently produce disyllabic trochees. For four-syllable words the primary stress goes on the second foot. Example 5.10.3 has a pitch peak anchored on the third syllable in the pattern (σσ) ('σσ), though the second-syllable has its own peak arising from the release burst of the aspirated [k<sup>h</sup>], which I interpret as an “obstruent perturbation” rather than part of the phonological stress pattern (Himmelman & Ladd, 2008,

p. 270). Together with patterns to be illustrated below for polysynthetic verbs, I take this as evidence that the right-most foot in the *stem* (§5.9.2) is the head foot in a polypedal word.



(5.10.3) malkimarrin → (,mal ki) (‘ma rin)  
*vein* (BP, PSE)

MP also has a few five-syllable adjectives, which pattern as (,σσ)(‘σσσ).<sup>78</sup>

It is trisyllabic words that present some difficulty for analyzing monomorphemic stress. The peak in pitch and intensity for these is unpredictable, occurring on the first or second syllable (henceforth “σ1” and “σ2”) of various words. To some extent this might be interpreted as a phonetic-level phenomenon, a rightwards drift of pitch accent from its anchor that has been previously attested for Kayardild (Round 2009: 318). This would provide a simple analysis of trisyllables as having σ1 stress phonologically, even if the phonetic realisation might drift into σ2. But the problem with this argument is that some lexical items show a much stronger tendency to peak pitch/intensity on σ2 than others, and

<sup>78</sup> Evidence on pentasyllabic monomorphemes is rather scarce, but one example is *tharrkattharrkatmam* → (,t̪ar kat) (‘t̪ar kat mam) “sticky” (DP, 2011-09-01a).

there is no obvious segmental explanation that might account for these. In particular, neither the distribution of heavy and light syllables, nor of sonorants and obstruents, determines the location of this peak.

Table 5.10.1 lists words attested with an  $\sigma_1$  peak in citation form, supporting an ( $\sigma\sigma\sigma$ ) analysis. These encompass a range of heavy/light syllable distributions, as well as obstruent/sonorant consonant patterns.  $\sigma_1$  stress seems to be the more common pattern:

Heavy (H) / Light (L) syllables	Example words
L L L	<i>thumulu</i> “ochre”, <i>ngapurlu</i> “breast”, <i>nukunu</i> “he/him”
L L H	<i>kumulung</i> “blood”, <i>nginipuny</i> “body”
L H H	<i>ngalantharr</i> “old man”
H L H	<i>kanthanyiny</i> “sweet”
H H H	<i>mirlmirlmirl</i> “pimple” <sup>79</sup>

**Table 5.10.1 Trisyllabic monomorphemic words with first-syllable peaks in citation form**

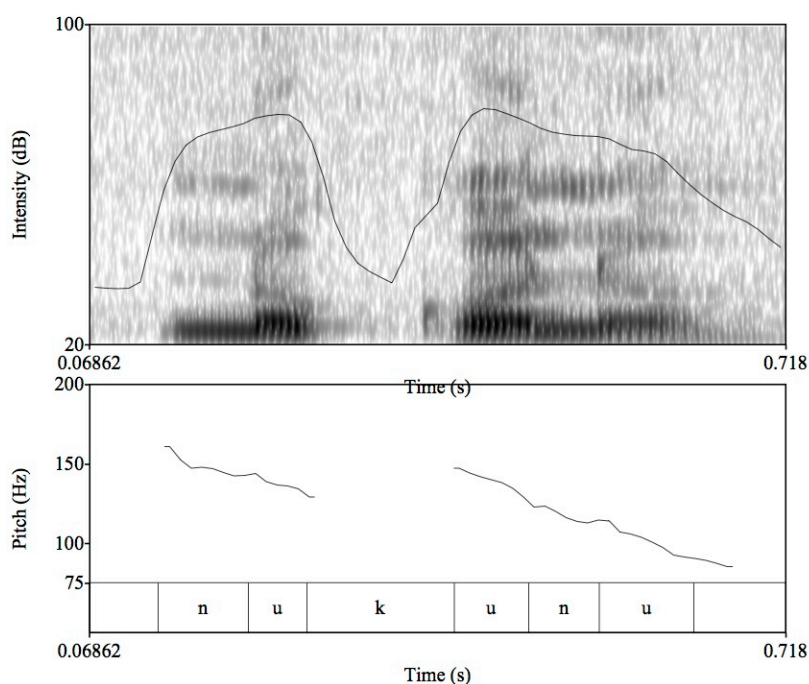
Table 5.10.2 lists words attested in citation form with an  $\sigma_2$  peak, supporting an  $\sigma(\sigma\sigma)$  analysis. Again, these encompass a range of heavy/light syllable and sonorant/obstruent distributions:

Heavy (H) / Light (L) syllables	Example words
L L L	<i>ngapapa</i> “sugar glider”
L H H	<i>magulkul</i> “heart”
H L L	<i>kumparra</i> “in front”
H H L	<i>perrkenku</i> “two”
H H H	<i>bukmantharr</i> “red”, <i>mampurrkin</i> “women’s dance”, <i>ngalmungkirr</i> “pied goose”

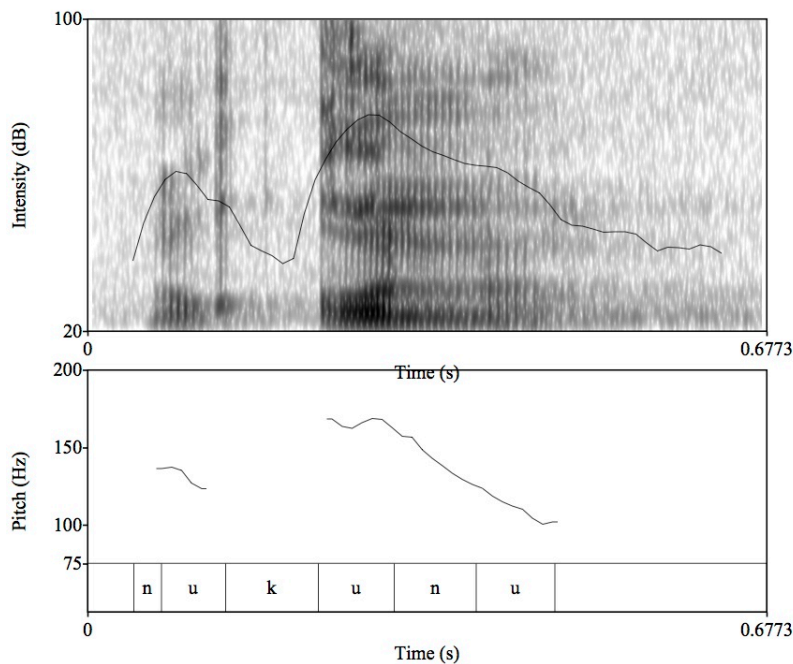
**Table 5.10.2 Trisyllabic monomorphemic words with second-syllable peaks in citation form**

<sup>79</sup> Clearly this is a lexicalized reduplicant, but it is the only initial-stress HHH example I know of.

The words listed in tables 5.10.1–2 are consistently spoken with  $\sigma_1$  and  $\sigma_2$  pitch peaks respectively; they seem to have lexically specified “tunes”. This observation is supported by both Street and Mollinjin (1981:206) and Walsh (1976: 107), who claim that trisyllabic words can have either  $\sigma_1$  or  $\sigma_2$  stress. But there are also some words that appear with variable tunes in the citation forms of different speakers, casting doubt on whether they really do have a lexically specified tune, or whether perhaps they are undergoing stress shift. Example 5.10.4 is a citation form of *nukunu* “he” spoken with  $\sigma_1$  stress by an SMP speaker. Example 5.10.5 is the same word spoken by an MKK speaker with apparent  $\sigma_2$  stress. I have noticed this variability particularly on words with a voiceless obstruent at the onset of the second syllable; however further research is required to understand this phenomenon.



(5.10.4) *nukunu* → (' **nu** ku nu)  
*he* (GM, Butcher 1990)



(5.10.5) nukunu → **nu** ('ku nu)  
*he* (MJ, PSE)

There is a likely etymological explanation for some (but not all) of the words showing the strongest tendency to second-syllable peaks. *Mampurrkin* “womens’ dance” and *magulkul* “heart” are synchronically monomorphemic nominals, but look very much like they have lexicalised from verb classifier + root combinations (cf. Round 2009: 133).<sup>80</sup> According to verb stress patterns outlined in the following section this would give them the  $\sigma(' \sigma \sigma)$  form suggested by their pitch peaks. Similarly, the animal species *ngalmungkirr* “pied goose” and *ngapapa* “sugar glider” are probably both borrowed from noun classifier + noun combinations used in Marri languages (< *awu mungkirr*, *a vapa*), in which case their first syllables in MP are derived from proclitic elements that are not stressed in the source languages, and remain unstressed after univerbation in MP.

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<sup>80</sup> *mampurrkin* “womens’ dance” and *magulkul* “heart”: *mam-* and *ma-* are third person singular forms of VC8, NFUT and FUT respectively; *-purrk* is still synchronically a verb root meaning “dance”; *-gulkul* is not synchronically analysable, but could plausibly be an onomatopoeic verb root describing the pumping of blood through the body (Jane Simpson, *p.c.*).

The observations made here on trisyllabic word stress raise more questions than they answer, but it is hoped that more clarity can be reached through further research.

### 5.10.3 Stress in multimorphemic verbs

In multimorphemic verbs the distinction between the domains of the *stem* and the *clitic group*, as outlined in §5.9.2, is operative in determining stress. The “head foot” – i.e. the trochaic foot in which the first syllable is assigned primary stress – occurs at the right margin of the stem. This principle generalizes to monomorphemic words, where the stem is equal to the word. The verb root is always right-most in the stem domain, and where it is disyllabic it forms the head foot:

(5.10.6) pume-**ngkadhap**-tha → (,pu meŋ) ('ka ɖap ɬa)  
 3PL.HANDS(8).PST-**steal**-PST  
*they were stealing (the car)* (LK, Blythe 2004)

(5.10.7) puma-**rirda**-nime → (,pu ma) ('ɽi ɖa) (,ni me)  
 1INCL.HANDS(8).FUTIRR-**push**-PAUC.MASC  
*let's push it!* (LK, Blythe 2004)

(5.10.8) ngurran-**ngerren**=yu → (,ŋu ran) ('ŋe ren) (,ju:)  
 1S.GO(6)-**speak**=TAG  
*I'm speaking* (FB, Blythe 2004)

If the verb root is trisyllabic, either its first syllable joins the foot headed by a monosyllabic or disyllabic verb classifier, leaving a disyllabic head foot formed in the verb root (5.10.9–10), or it forms a trisyllabic head foot (5.10.11). The selection of these strategies may be determined by the etymological roots from which these synchronically monomorphemic verb roots are historically formed. For example the root *-rikerdek* “finish (something)” looks like a lexicalization



of *-ri* “bottom” with the synchronically unanalyzable *-kerdek*. It is the disyllabic second element that forms the strong foot (5.10.9). The root *-dhawibu* “light tobacco” has undoubtedly been formed from *-dhawi* “mouth”, again with an unanalyzable second element; but in this case it is the disyllabic *first element* that heads the strong foot. A tentative principle can be formulated here: starting from a boundary at the right edge of the verb root, primary stress is assigned to the first disyllabic morpheme moving right-to-left. This accounts for most of the examples presented in this section, with a few exceptions apparently motivated by the disruption caused by monosyllabic morphemes, as described below.

- (5.10.9) dam-ri(kerdek) → (,daŋ ti) ('ke ɖek)  
 3S.POKE(19)-finish  
*he finished it* (DP, PSE)
- (5.10.10) puma-ri(kerdek) → (,puma.ɟi) ('ke ɖek)  
 3PL.HANDS(8).FUT-finish  
*they will finish it* (synthetic example)
- (5.10.11) bangam-(dhawi)bu → (,ba ŋaŋ) ('ɖa wi bu)  
 3S.STRIKE(14)-light.tobacco  
*he's lighting a cigarette* (BP, PSE)

### 5.10.3.1 Re-footing monosyllabic verb roots

If all verbs had their primary stress in the root (or body-part plus root compound), then we could analyse the verb as consisting of two prosodic words, each with its own stress assignment, but sharing an intonation phrase, with the second unit taking the pitch peak. It is only with monosyllabic verb roots that stress assignment in the verb takes the whole as a single prosodic word.

When the verb root is a monosyllable it either joins a foot headed by the preceding morpheme, or builds its own foot by recruiting the following tense suffix. I have not yet studied enough examples to describe how these two

strategies are ranked, or if they are variably applied – though it is clear that the monosyllabic root can only head a trochaic foot if it has some suffix to support this.

Where the head foot is built using a pre-root morpheme, this may be either a monosyllabic or disyllabic verb classifier (exx.5.10.12–13), a bound object pronoun (5.10.14–15), an incorporated body part (5.10.16) or the paucal number marker (5.10.17). The second syllable of the dual marker *-n(g)intha* may also be recruited in this way (5.10.18).

- (5.10.12) pan-**ret**=yu → ('paŋ **ɖet** ju)  
 3s.23-**start**=TAG  
*he started it* (FB, Blythe 2004)
- (5.10.13) marda mangan-**art** → ('ma ɖa) ('ma ŋa **nat**)  
 stomach 3S.GRAB(9)-**get**  
*I want it* (FB, Blythe 2004)
- (5.10.14) picture ma-nyi-**rta**-nu → ('pi ce ma) ('ni **ta** nu)  
 photo 1S.GRAB(9).FUT-2S.DO-**catch**-FUT  
*I'll photograph you* (KB, Walsh 1986 Tape-01)
- (5.10.15) puddam-ngarra-**matj** nganaka  
 3PL.TURN.RR(30)-1PL.IO-**carry** AGREE  
*they picked us up, you know?* (KB, Walsh 1986 Tape-10)  
 → (,pud dam) ('ŋa ra **mac**) (,ŋa na ka)
- (5.10.16) pan-be-**parl** → pan ('be **pa**)  
 1s.23-arm-**strike**  
*I hit him on the arm* (KB, Walsh 1986 Tape-01)

- (5.10.17) pumam-ka-**purl** → (,pu mam) ('ka **pu**)  
 3PL.HANDS(8)-PAUC-**wash**  
*they washed it* (KN, PSE)
- (5.10.18) mungam-nintha-**parl** → (,mu ŋam niŋ) ('ɖa **pa**)  
 1S.11-DU.MASC-**break**  
*the two of them broke it* (BP, PSE)

Note that the last example splits a morpheme across two feet. This is quite unusual, and I have only noticed it for the dual number morphemes *-ngintha* / *-nintha*. Under other conditions these morphemes can also form unified feet:

- (5.10.18) kanam-**nintha** → (,kanam) ('**niŋta**)  
 3S.BE(4)-DU.MASC  
*the two of them are there* (KB, Walsh 1986 Tape-57)

The alternative mechanism, where the root recruits the tense marker to build a foot, provides the only case in which a morpheme to the right of the root behaves like part of the stem domain. The foot produced from verb root and tense marker may be either the head foot (ex. 5.10.19) or a weak foot (5.10.20).

- (5.10.19) ngay=ka ngurdi-**wurl-nu**=warda  
 1S=TOP 1S.TURN.DTR(30).FUT-return-FUT=IMM  
*I'll go back now* (KB, Walsh 1986 Tape-00)  
 → ('ŋaj ka) (,ŋu ɖi) ('**wu** | **lu**) (,wa ɖa)<sup>81</sup>
- (5.10.20) ngurdi-**jit-nu** → ('ŋu ɖi) (, **jit nu**)  
 1S.TURN.DTR(30).FUT-chat-FUT  
*I'll have a chat* (KB, Walsh 1986 Tape-20)

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<sup>81</sup> Also subject to /n/-lateralisation (§5.9.3.3).

Apart from these exceptional instances where a tense marker is used to build a foot with the verb root, all morphemes to the right of the verb root are excluded from the assignment of primary stress. It is the morphemes constituting the stem (i.e. from the verb classifier to the root) that reproduce the stress patterns found in monomorphemic words (i.e. 'σσ, 'σσσ, σ'σσ, ,σσ'σσ, ,σσ'σσσ). Morphemes to the right of this behave more like clitics in the sense that they cannot be assigned primary stress, and do not affect how stress is assigned in the “core” part of the verbal word:

(5.10.21) kardu pumam-ka-purl-**nime-nu**                      nantji      trak  
                   PERS    3PL.HANDS(8)-PC-wash-PC.MASC-FUT    THING      vehicle  
                   *they are going to wash the car*                      (AnB, PSE)  
                   → ('ka dʌ) (,pu mam) ('ka pu] (,ni me nu)

In my analysis of verb morphology (§8.5), we will see further evidence of post-root morphemes being excluded from the inner phonological domain of verbs, in that they do not affect the rule of the bimoraic word minimum.

### 5.11 Summary

This chapter has provided an overview of MP phonology as a descriptive basis for more detailed investigations of various phonological and grammatical phenomena found in MKK.

In the next chapter we will see how the segmental and phonotactic inventories described here are extended in MKK through the borrowing of English/Kriol vocabulary. Patterns of MP phonemic contrast, assimilation, and phonological word structure are effectively put to the test by the integration of these foreign forms, and we will see that some of these patterns are more resistant to change than others.

Chapter 7 is a sociophonetic study of the voiceless peripheral obstruents /k/ and /p/, the results of which can be interpreted as reinforcing the argument for a leniting morpho-phonological alternation made in this chapter.

Chapters 8–11, while describing morphosyntactic phenomena, rely on the descriptions of phonological alternations and word stress presented here.

## **English/Kriol lexical borrowing and phonological integration**

### **6.1 Introduction**

In this chapter I discuss English/Kriol lexical borrowings into Murriny Kardu Kigay (MKK), with a particular focus on patterns of phonological integration. The question of whether Kriol, Aboriginal English or Standard Australian English is the source of a borrowing is of some interest, but can rarely be answered satisfactorily. Most of the borrowings could equally be from any of these sources, especially given the lack of data on local Kriol dialects.

The major findings in this chapter are that voiceless fricatives, diphthongs, and syllable onset clusters are all retained in borrowings (or at least in some borrowings), while other phonological material is generally assimilated to MP patterns. However there is considerable variation among speakers and among lexemes.

Contemporary kigay are certainly not the first generation to have borrowed English lexicon into MP. Both archival recordings from the Mission era, and more recent recordings of older people who grew up during the Mission, show that older people do also borrow English vocabulary, though I will argue that the quantity of borrowings in discourse is probably greater among young people. As for degrees of phonological integration, I note some evidence suggesting that older borrowings are more likely to be adapted to MP phonology, while more recent borrowings are more likely to retain English phonological material. However I am not able to make any strong claims about generational change, since there is no substantial data recording how English borrowings were

pronounced in earlier eras or by older speakers. Naturally, it was the indigenous vocabulary that was the main focus of earlier grammatical descriptions.

Therefore in the phonological sections of this chapter I do not compare MKK to the speech of Mission-era speakers as such, but rather to the traditional MP (TMP) phonological system, as documented by earlier linguists (Street & Mollinjin, 1981; Walsh, 1976).

This chapter is mostly taxonomic in form, going through the segmental and phonotactic structures that feature in English but not in traditional MP, and describing the manner in which each is integrated into MKK. The taxonomic sections are preceded by an overview of MKK lexical borrowing, and a brief review of literature on phonological integration.

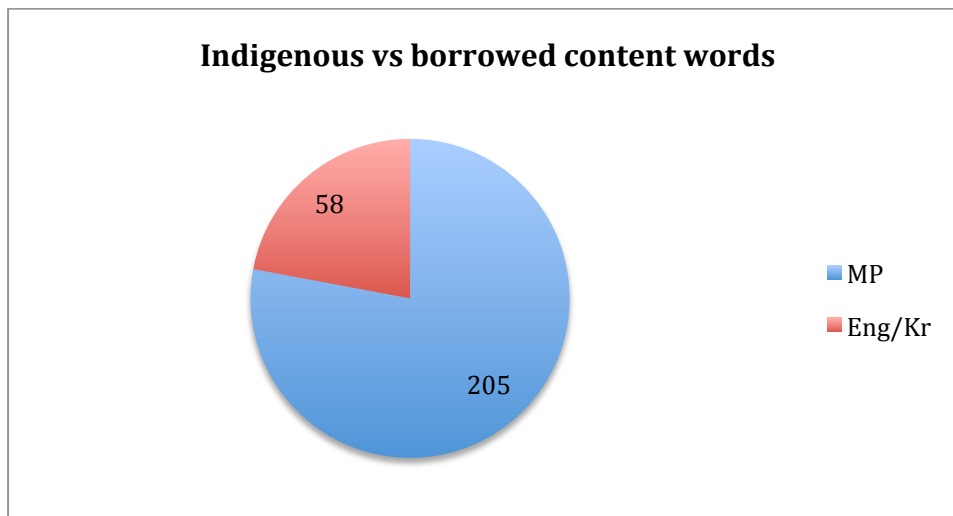
The phonological structures of English dealt with here go only as far as segments, and the permissible sequencing of segments in the word and syllable. Prosodic structures of English, though equally foreign to MP, and equally in need of integration for the purposes of lexical borrowing, are beyond the scope of this chapter.

## **6.2 Lexical borrowing in MKK**

A substantial proportion of nouns, verbs and adjectives used in MKK are English/Kriol borrowings, while grammatical morphemes and function words are almost exclusively from MP sources. I consider these to be lexical borrowings, rather than code-switches, because they generally do not involve a switch to English morphology or syntax (Poplack, Sankoff, & Miller, 1988).<sup>82</sup> In a natural conversation sequence of about 15 minutes' duration, between three kigay and with the author out of earshot, borrowings account for 22% (58/265) of content words, with these borrowings encompassing 47 distinct lexemes:

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<sup>82</sup> There is an extremely small number of instances in the data where "islands" of English morphosyntax do occur (Myers-Scotton, 1993), and I do consider these, by contrast, to be code-switches (§4.7.4).



**Figure 6.2.1 Proportion of content words that are English/Kriol borrowings in a single conversational sequence of about 15 minutes (DP/PP/BM, 2011-09-01\_02, lines 1-190)**

The 58 borrowed tokens comprise 47 distinct borrowed lexemes, including: *back road, shortcut, supper, finish, taste, tea, mob, family, story, money, pocket, save, contract, pay day, ten o'clock, two-hundred, killing time, really, lump, friend, policeman, late, heavy, same.*

A count of content-word borrowings in two shorter fragments of older women's conversation (Blythe 2009-11-21, 2011-08-28) reveals 2% and 10% borrowing rates respectively, suggesting that the proportion of borrowed content words is increasing among younger speakers. There are no clear differences of topic between the younger and older conversation samples considered here; both include an eclectic series of recollections and observations, and the kigay conversation in fact includes extensive discussion of a traditional Dreaming story which might be expected to have more traditional vocabulary, though this does not appear to be the case. At this stage I cautiously hypothesise that the array of speakers present is the main factor determining differences in borrowing rates between these conversation samples, though more extensive counts from the discourse of speakers of various ages and covering various speech situations/topics would be required to conclusively demonstrate this.



### 6.2.1 Gratuitous borrowings and socially marked speech

Apart from a general increase in the quantity of borrowings in discourse, another difference between the MKK and standard MP corpus items cited above is the use of *gratuitous* (Haugen, 1950), as opposed to *cultural* borrowings. By “cultural borrowings”, I mean words that are borrowed to denote artefacts and practices that have been recently introduced to Wadeye through cultural contact: *nantji trak* “car”, *ku mani* “money”, *bayim* “buy (with money)”. By “gratuitous borrowings”, I mean words borrowed to denote things that are not new phenomena introduced by cultural contact, and which therefore are used despite there being more or less synonymous indigenous terms. Examples are *tju eks* (< *axe*) being used instead of the indigenous *tju litjurr*, or *flot wurran* (< *float*) being used instead of *wurrarnturturt*. In Canadian French, which like MKK has large-scale lexical borrowing from English, more extensive quantitative investigation has shown that the majority of borrowings are gratuitous (Poplack et al., 1988, p. 61). In view of the fact that kigay all speak MP as their first language, and in many cases have quite limited competence in English or verbal interaction with English speakers, their use of gratuitous borrowings cannot be easily accounted for by the requirements of communication or accommodation. This suggests that the practice has instead been adopted for its social function, which I will argue is for the marking of a distinct youth variety, culturally oriented towards town life as opposed to traditional bush life (§13.5).

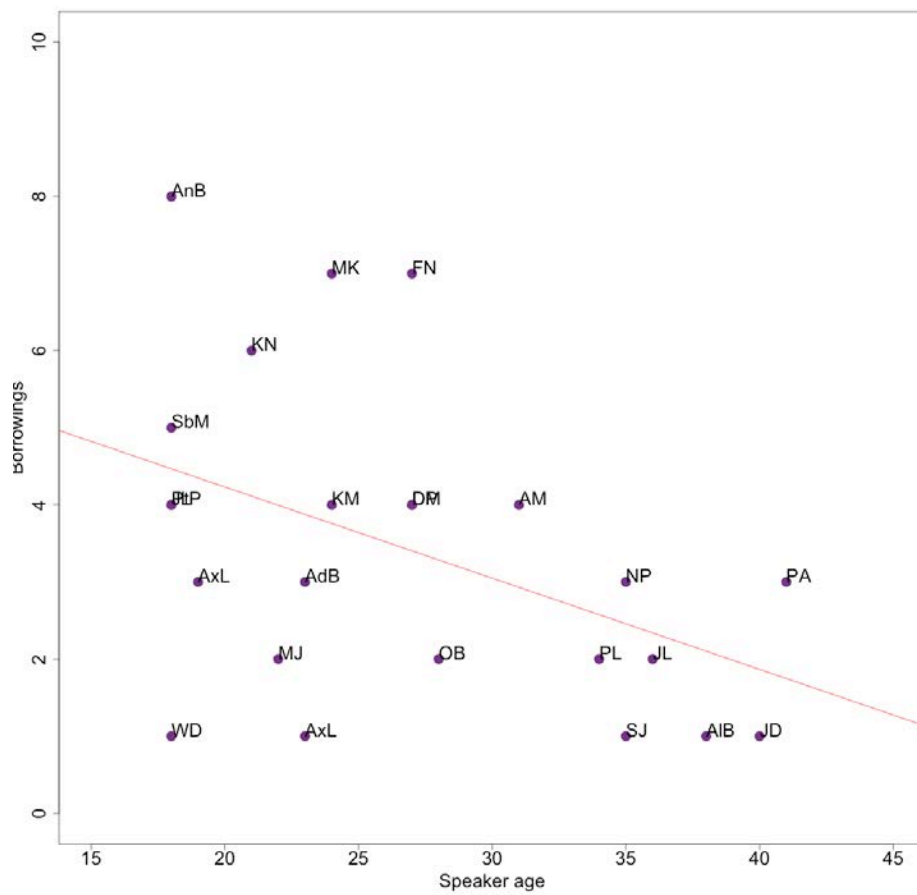
Gratuitous borrowings account for a substantial proportion of the borrowings in the MKK conversation cited above, but the speech of older women contains just a single instance, *apap* (< *half-half*), “shared equally”. Examples 6.2.1–2 illustrate gratuitous borrowings found in the MKK conversation, as well as a cultural borrowing, “tea”:

- (6.2.1) kanyi=ka **tjaba**<sup>83</sup> ngarra kama **finish** nguyema-nu  
 PROX=TOP evening LOC DUBIOUS finish 1PL.DO(34).IRR-FUT  
*it might be evening when we finish here* (PP, 2011-09-01)
- (6.2.2) ngam-thap=ngem-ka **teis** burrk=matha kura **ti**  
 1S.MOUTH(19)-touch=SIT(1).SER-TOP taste great=EMPH WATER **tea**  
*it tastes great, this tea* (DP, 2011-09-01)

Careful speech data additionally shows higher levels of gratuitous borrowing by the youngest kigay within the 18–43 age group. In the picture-stimulated careful speech sessions (§1.5.2) each speaker named about 100 objects or actions shown in still pictures; some involve cultural borrowings such as “(football) goal”, “hat”, “spoon”, and the English words that most kigay used for these are not considered here, since there are no MP equivalents, and their use by the kigay therefore simply reflect specificity of response. But most kigay in addition produced some gratuitous borrowings in these sessions, usually only for 2–3 items, but for some kigay as many as 7–8. Figure 6.2.2 plots kigays’ age against the number of gratuitous borrowings they produced in their careful speech sessions. A line of best fit (based on sum of squared deviations) shows the overall tendency for younger kigay to produce more gratuitous borrowings, though the “goodness of fit” ( $r^2$ ) for this line is low at 0.196.

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<sup>83</sup> *Tjaba* “evening” is borrowed from English *supper*, the meal provided in the evenings during the Mission days (Street 1987).



**Figure 6.2.2** Number of gratuitous borrowings used in PSE careful speech test (§1.5.2), plotted against speaker age. “Goodness of fit”  $r^2 = 0.196$

The gratuitous borrowings produced in this data include nouns such as *badi* (< body), *krik* (< creek) and *flat* (< flood); adjectives such as *redwan* (< red) and *klinwan* (< clean); and verbs such as *rari* (< worry), *dentjing* (< dance) and *washing*. There was no obvious implicational hierarchy in which speakers used which borrowings.

### 6.2.2 Word classes borrowed

The proportional distribution of borrowings among word classes is much as predicted by cross-linguistic “hierarchies of borrowability” (Haugen, 1950, p. 224; Weinreich, 1953, p. 67). Nouns are the most borrowed word class by a large margin, followed by verbs (discussed extensively in Chapter 9), adjectives and

adverbs in fairly similar quantities, and with all function-word types (pronouns, conjunctions, prepositions, auxiliaries) together making up a very small proportion of borrowing. Demonstratives and inflectional morphology are never borrowed in MKK. The counts and percentages of borrowing tokens belonging to various word classes across five randomly selected MKK natural speech fragments are shown in Table 6.2.1:

<i>Noun</i>	<i>Number</i>	<i>Verb</i>	<i>Adjective</i>	<i>Adverb</i>	<i>Interjection</i>	<i>Function words*</i>	<i>Derivational affix**</i>	<i>Total</i>
63% (88)	9% (13)	4% (6)	12% (16)	3% (4)	3% (4)	3% (4)	3% (4)	139

**Table 6.2.1 English/Kriol borrowing tokens counted by word-class**

\* “Function words” = pronoun, aux. verb, conjunction, preposition (1 token each)

\*\* I consider *-mup* (< Eng/Kriol *mob*, see below) to be the only borrowed derivational affix in MKK.

### 6.2.3 Structural changes in borrowed forms

A number of structural changes are found in borrowed forms – that is to say, whole phrases of English/Kriol being borrowed as single words, and forms that are independent words in English/Kriol being borrowed as bound morphemes. The former case is found particularly in verb borrowings, where there are many cases of English phrasal verbs being treated as unitary words in MKK, e.g. *meikit* (< make it), *topap* (< top up), *singten* (< sink down). There are also some cases where this occurs with entire idiomatic phrases such as *kilingtaim* (< kill time), *filaikit* (< feel like it) and *duwutjulaik* (< do what you like), the latter being notable in that it is borrowed with the second-person pronoun “you” ossified into the phonological form, but with its function lost. Subject person and number is instead marked on the light verb that this combines with:

(6.2.3)	duwutjulaik=warda	<b>ngem</b>
	do.what.one.likes=IMM	<b>1s.SIT(1)</b>
	<i>now I can do whatever I like</i>	(LP, 2012-06-30)

These phrase > word verb borrowings all behave consistently as single words: i.e. without potential for pause or intervening material, and with word-like stress patterns.

One case where an independent English/Kriol word has become a bound morpheme in MKK is the nominal suffix *-mup* (< mob), deriving “people associated with NOUN” (§4.7.3). There is also the matter of the adjectival suffix *-wan* (< one) – e.g. *yelawan* “yellow (one)”, *faswan* “fast (one)” – though it is likely that this has been borrowed via Kriol as part of adjectival lexical items, since it shows no sign of productive usage in MKK. Another way that independent English/Kriol words become bound in MKK is as part of lexicalized compounds, where they combine with an indigenous body part nominal to form an indivisible lexical item (cf. Haugen, 1950, p. 221; Simpson, 1985). There are three attested examples that compound with the body part *me* “foot”: *mebut* (< boot), *mesak* (< sock), *mewil* (< wheel) – the last involving a metaphorical mapping of motor vehicles onto the body of an animal. There is a further single example where *-be*, the verbally incorporated body part “arm” (§8.4.4) is compounded with *tjigan* (< shake hands), then subjected to an obstruent lenition process (§5.9.5) to produce the embedded verb root *-beyigan* – which is also unique in being the only attestation of a borrowed form becoming an embedded verb root (§9.2.1). The number of such “hybrid” compounds is very small, suggesting that this may not be a productive word-formation process among young speakers.

In addition to hybrid compound words, there are phrases that calque idiomatic (Australian) English using a combination of indigenous and borrowed forms. These are labelled “loan blends” by Haugen (1950, pp. 218–219). Three examples use the negator *manangka*: *manangka aidiya* (“no idea”), *manangka fe* (“no fair”) and *manangka sent* (“boring / bored, no sense, pointless”). Another

similar case is *aiding manganart* (“he got a hiding”), in which the noun element of the phrase is borrowed and the verb “he got” uses an MP form.

### 6.3 Phonological integration of borrowed vocabulary

Adult second language learners usually produce the phonology of their second language(s) imperfectly, due to “interference” from their L1 (Schmid & Köpke, 2007). Speech communities take on lexical borrowings through a “distributed” version of the same process. Bilingual competence in an L2 is distributed throughout among individuals in the community, and as those with bilingual competence borrow vocabulary from the L2 into their L1 speech, some of the most frequently borrowed items become part of the L1 vocabulary. Borrowed words become available to everyone in the community, including those who have little or no L2 competence, and in this way we can expect the degree of phonological interference from L1 to be more intensive (Haugen, 1950). In fact, some lexical items may be thoroughly modified to fit the phonological patterns of L1; but others may retain phonological features that are not present in the L1 system, but become part of the L1 phonology through such borrowings. For example, among the mass of lexical borrowings from French into English over the last millennium, the recent borrowing *garage* is nativised from French [ˈgæʁɑʒ] to (Australian) English [ˈgæ.ɹɑ:dʒ ~ gəˈɹɑ:dʒ]. On the other hand, though /v/-initial words were once absent from English, and earlier Latin borrowings were nativised to /f/ (e.g. *Fergilius* < Lat. *Virgil*), the weight of French borrowings in Middle English eventually retained the phoneme, so that contrasts such as *feel* vs *veal* (< Fr. *veel*) could be sustained (Labov, 1994, p. 332; Lass, 1992, p. 58).

The founding modern studies of such effects are Haugen (1950), which provides an overview of lexical borrowing and some proposed terminology (see below), and Weinreich (1953), which provides a more focused analysis of how and why Schwyzertütsch speakers in Grisons, Switzerland, “mis-pronounce” the Romansh language of the neighbouring village. For example, Weinreich argues that a

Romansh palatal stop /c/ is reinterpreted by Schwyzertütsch speakers as their L1 affricate /tʃ/; or again, the Romansh geminate consonant /ss/ is conflated by Schwyzertütsch speakers with the single consonant /s/ (p. 17). Weinreich gives a clear analysis of these and other interference effects, though the situation he describes is quite different to that of MKK, where rather than bilinguals switching between L1 and L2, we are interested in how lexical borrowings from L2 are *integrated* into L1 – that is to say, used as part of MKK by all its speakers, many of whom have quite limited bilingualism in English (§4.5).

A large-scale, longitudinal study of English borrowings in Canadian French (Poplack et al., 1988; Poplack & Dion, 2012) is a major study of phonological loanword integration that uses quantitative methods to investigate the variability of assimilation. The key findings here are that some borrowings are quite consistently assimilated, while others only variably so, and the latter are more likely to be assimilated by speakers with less competence in the source language (1988: 74). A corollary of this is that borrowings are more likely to be assimilated phonologically if they are diffused among more speakers (p. 73). A comparison of corpora representing more than a century of time depth shows that of all the nonce borrowings deployed, only a very small proportion later become established borrowings (2012).

The phonological effects of such large-scale lexical borrowing have been described with respect to various modern “mixed languages”. With respect to Media Lengua, a mixture of Spanish and Quechua spoken by ethnically Quechua people, Muysken (1997) describes a “predominantly Quechua phonology”, with some Spanish phonemes imported. A more detailed phonetic study of a different Media Lengua dialect focuses on the integration of Spanish vowels (Stewart 2011). Gurindji Kriol provides another instance where a mixed language integrates a more complex vowel system (five monophthongs plus five diphthongs of Kriol [Sandefur, 1984]) into a simple three-vowel system (Gurindji /i, e, u/). In a paper focusing on child acquisition of the vowels, Jones, Meakins and Muawiyath (2012) report that the monophthongs of Kriol are all retained in Gurindji Kriol, though they do not discuss diphthongs.

The case of Michif might provide another comparable study, though phonological research here has focused largely on Bakker's surprising claim that Michif has "two separate phonological systems" (Bakker, 1997, p. 80; for a dissenting view see Prichard & Shwayder, 2013). In my analysis of MKK I do not refer to two phonological systems, but rather a single system in which the phonemic inventory has been enhanced. The new phonemes and phoneme sequences appear only in borrowed vocabulary, and in this sense there is a lexical split between (recent) borrowings that have one segmental inventory, and long-term indigenous vocabulary that has a another inventory. However almost all borrowings, even if they do import non-MP material, in other ways are shaped by MP phonology. For example *flood* → /flat/ uses the English phoneme /f/, and an English onset cluster /fl/; but in the same lexical item we also see MP phonological patterning in the devoicing of the final obstruent. There is also the matter of lexical items that vary between English-origin phonology and MP patterns (e.g. *fishing* → /fɪʃɪŋ/ ~ /pɪʃɪŋ/), including perhaps some that are making a phonological change-in-progress. Together these phenomena blur any line we might hope to draw between "separate phonological systems".

Studies describing loanword integration into traditional Aboriginal languages have been done for Martu Wangka, Warlpiri and Gamilaraay (McManus, 2008), although in these cases all material is adapted to the local phonologies, and the bulk of the analysis focuses on how this might reflect constraints in an Optimality Theory framework. Loanword adaptation of Macassan vocabulary has also been documented for Arnhem Land languages (Evans, 1992). Studies that describe variable adaptation/importation have described Pitjantjatjara (Langlois, 2004, pp. 41–48), and Tiwi (Jennifer Lee, 1987, pp. 49–64). The latter is perhaps the most empirically detailed, though it is not altogether comparable to my investigation of MKK in that it describes speakers in a process of language shift from Tiwi to English or Kriol, where variation in phonological production appears to be tied to shifts from more Tiwi-oriented to more English-oriented phonologies. There is no shift of this type apparent in MKK.



### 6.3.1 Terminology and methodology

Haugen was perhaps the first to explicitly propose terminology for describing phonological integration. He uses “loanword phonology” as a label for the whole range of phenomena, while an “import” is a loanword that does not undergo any substantial phonetic modification, and “substitution” occurs in the opposite case, where modifications are made to better fit the L1 phonological system (pp. 212–215). I take on the term “import” from Haugen, though I further distinguish between borrowings that are largely unchanged because their phonological structure fits neatly into comparable L1 structures, and borrowings that are largely unchanged because their phonology is being introduced as an addition or innovation into L1 phonology. Where a borrowing from English/Kriol fits into MP phonology without requiring any change, I refer to “transparent integration”. For example the word *kap* (< *cup*) can essentially become a MP word without modification. Meanwhile I use Haugen’s term “import” for the cases where the borrowing maintains its source form, but this does not fit standard MP phonology. For example, *finish* is imported into MKK without any noticeable phonetic modification, despite the fact that its initial and final fricatives are quite foreign to MP phonology.

As for Haugen’s “substitution”, I prefer the term “assimilation” (Poplack et al., 1988), which for me better conveys the idea of something foreign being integrated into a local system in a way that preserves the characteristics of the local system. The term “adoption” is used elsewhere for the same phenomenon (e.g. Evans, 1992; McManus, 2008). I also find the need for a further term, “merger”, to describe cases where two English phonemes that do not fit MP phonology are integrated into MKK as a single new phoneme. With some variation, this is the case for English vowels /ɔ/ and /o:/, which are *merged* into MKK as /ɔ/.

In the mixed languages mentioned above, mass lexical borrowing is long established. Documentation of these languages implies that speakers have

settled fairly clearly on particular pronunciations – though there might still be some variation according to the speech situation, depending on whether speakers feel that they should aspire to pronounce words more “correctly” with respect to their English, Spanish or French sources (Jones et al., 2012). In the case of English/Kriol integration in MKK, however, I find something more akin to what has been reported for English borrowing in Canadian French (Poplack et al., 1988): substantial variation among lexemes, among speakers, and between careful and natural speech. André Martinet summarises such variation quite elegantly in the preface (p. vii) to Weinreich’s volume:

*each individual is a battle-field for conflicting linguistic types and habits, and, at the same time, a permanent source of linguistic interference*

Rigorous quantitative analysis of this “battle-field” is beyond the scope of this chapter, which rather attempts to sketch out the main patterns of integration, and identify some salient points for further quantitative research. I aim to make general statements about which English phonemes and phonotactic sequences are imported into MKK, and which are assimilated; this requires in many cases that a certain amount of variation is simplified into a statement of the apparent general trend.

I simplify variable pronunciation into general statements of importation / assimilation according to the following principles. Data from careful speech is held under a cloud of suspicion, due to the possibility of cross-linguistic hypercorrection as mentioned above. When careful speech pronunciation is at variance with natural speech data, I take the latter as the more reliable indicator of the integration pattern. Where such contradictions occur (and some are described in the sections below), it is always in the direction of greater assimilation in natural speech, and more importation in careful speech, as we should expect given our concerns about attempts to produce “correct English”. However on the other hand the appearance of such hypercorrection in the careful speech data is far from overwhelming, and therefore these sources are still informative, especially regarding different integration types for the same

phoneme as it appears in different lexemes, and differences among speakers. Finally, there are some points (e.g. the integration of /ʒ/), on which I can make no firm findings due to lack of data – though in all such cases I attempt to mount defensible hypotheses based on patterns shown in comparable structures.

#### 6.4. Fricative and affricate integration

The major element of the English consonant inventory that is absent from MP phonology (and Aboriginal Australian phonologies in general) is contrastive fricative and affricate obstruents, which like English stops have voicing distinctions (e.g. /f/ vs /v/, /tʃ/ vs /dʒ/). Traditional MP phonology (TMP) has voiced and voiceless obstruents, but no contrasts for manner of obstruent constriction, which is in most cases a stop, except for the palatals (which are affricated), and the voiced dental and velar obstruents (which are often fricatives, §5.5.1). Though stops are the “canonical” realisation of all other MP obstruents, we will see in Chapter 7 that MKK has a fairly high frequency of non-contrastive fricative or approximant realisations.

	PERIPHERAL						
	Bilabial	LAMINAL				Palatal	Velar
		Dental	APICAL		Retroflex		
			Alveolar				
Voiceless obstruent	p <p>	t̥ <th>	t <t>	ʈ <rt>	c <tj>	k <k>	
Voiced obstruent	b <b>	d̥ <dh>	d <d>	ɖ <rd>	ɟ <dj>	g <g>	
Nasal	m <m>	ɳ <nh>	n <n>	ɳ <rn>	ɲ <ny>	ŋ <ng>	
Lateral			l <l>	ɭ <rl>			
Trill / flap			r <rr>				
Approximant	w <w>		j <y>	ɻ <ɻ>			

Table 6.4.1 Murrinh Patha consonant phonemes; see §5.3 for disussion.

In brief, English/Kriol borrowings import three voiceless fricatives – /f/, /s/ and /ʃ/, while the voiceless affricate /tʃ/ is imported in careful speech, but probably not in natural speech. The voiceless fricatives /θ/ and /h/ are assimilated to the obstruent /t̪/ and to zero respectively, and in general voiced fricatives are merged with their voiceless counterparts. The integration of fricatives and affricates into MKK is very similar to that reported for Roper Kriol (Baker, Bundgaard-Nielsen, & Graetzer, 2014);<sup>84</sup> this may reflect the influence of Kriol varieties in the borrowing of originally English lexemes in MKK, or it may simply reflect common assimilation strategies used by Aboriginal bilinguals, whose languages may be grammatically very different, but whose phonological inventories tend to be very similar (Evans, 1995). In Areyonga Pitjantjatjara the integration of fricatives is again very similar, except that in addition the s/z voicing distinction is imported (Langlois, 2004, pp. 41–43).

Table 6.4.2 gives an overview of the treatment of English fricatives and affricates in MKK. For each fricative or affricate, I list borrowed lexemes that *import* the English phone, *assimilate* it, or produce *mixed* results in sometimes importing and sometimes assimilating. Where possible I provide examples illustrating word-initial, word-medial and word-final positions.

		<b>Imported</b>	<b>Mixed</b>	<b>Assimilated</b>
/f/	f-	finish, fly*, flood, forked, forty, friend, fridge, (re)frigerator*, phone → [f]	fishing → [p ~ φ ~ f]	football → [p ~ φ ~ w]
	-f-	half-an-hour, telephone* → [f]		halfcaste → [p̥]
	-f	giraffe, cough → [f] (careful speech only)	half, knife → [f]	half-half, stuff → [p̥]

<sup>84</sup> The only difference I find from Baker et al's brief report on fricatives is that they report English dental fricatives being assimilated to Kriol palatal affricates, which does not occur in MKK. The absence of this assimilation supports my claim that palatal and dental positions are not allophonic in MP (§5.4).

		Imported	Mixed	Assimilated
/v/	v-			? video, violence → [b] [no careful recordings]
	-v-			level, oval → [β]
	-v			stove → [p̥]
/θ/	θ-			three, think → [t̥]
	-θ-			Katherine → [t̥]
	-θ	<i>no evidence</i>		
/ð/	ð-	<i>no evidence</i>		
	-ð-			father* → [faða] (can be interpreted as “transparent integration” see below)
	-ð	<i>no evidence</i>		
/s/	s-	circle, same, save, sink, sword, seven → [s] start, stop, stove, stuff → [s]		sell → [celim] song → [cuŋ] schoolboy → [kulbuŋ]
	-s-	disappeared, escape, disco, understand, destroy → [s] race → [resim]		
	-s			jealous, glass, mattress → [č̥] witness → [t̥]
/z/	z-			zigzag → [s]
	-z-			trousers → [t̥acič̥] design*, prison* → [s]
	-z		cheese → [z ~ s] <sup>85</sup>	lose, hose, organise → [s] cards, jeans → [∅]
/ʃ/	ʃ-	share, shit* → [ʃ]		shift → [ciptim]
	-ʃ-	washing, fishing → [ʃ]		
	-ʃ	finish, rush → [ʃ]	bush → [puč̥]	

<sup>85</sup> The data for cheese is from careful speech, and shows vowel voicing termination time (VTT) variably lagging into the fricative, thus [z] ~ [s].

		Imported	Mixed	Assimilated
/ʒ/		<i>no evidence</i>		
/tʃ/	tʃ-	chair, cheese → [cç] (careful speech only; distinct from MP /c/ in length of frication)		Chucky → [c]
	-tʃ-	<i>no evidence</i>		
	-tʃ			Mindil Beach, torch → [č]
/dʒ/	dʒ-		jeans, jam → [c, ʃ]	jail, jungle, giraffe → [j] [not distinct from MP [j], though this was only marginally phonemic word-initially]
	-dʒ-	<i>no evidence</i>		
	-dʒ			fridge → [č] bridge → [tʃ] (i.e. unreleased stop vs released affricate, see below)
/h/	h-		hammer, hat, hose → [h, ʔ, j, Ø] [imported in careful speech only]	house, hospital, horrors hunting → [Ø] half-half → [kapaf]
	-h-			alcoholic* → [Ø]

**Table 6.4.2 Integration of English fricatives and affricates in MKK**

\* = single attestation only

There is no evidence in the data regarding /ʒ/ and only a single token for /ð/, which is imported in *father* → [faða] “priest”. Importation is perhaps not surprising here, since MP /ð/ is usually realized as [ð] (see §5.5.4), in which sense this fricative can be regarded as a “transparent integration”. As for /ʒ/, if it is ever borrowed (perhaps e.g. in *measure*), I predict, based on the patterns outlined below, that it would be merged with the voiceless equivalent /ʃ/.

### 6.4.1 Imported fricatives

The three voiceless fricatives that are imported into MKK, /f/, /s/ and /ʃ/, are not categorically imported in all borrowed lexemes in which they feature. They are variably imported or assimilated, with most attested lexemes fitting quite neatly into either the “imported” or “assimilated” column, and only a few attested with substantial numbers of tokens in both categories. The picture-stimulated careful speech data is useful for testing consistency of importation/assimilation among speakers, since some borrowed lexemes have data from 10–20 kigay. This data reflects the lexical specificity of the pattern; for example 12 speakers unanimously import *fridge* → /fʏɪc/, while 9 speakers unanimously assimilate *football* → /pʊtʃu|. An example of a “mixed” lexeme is *fishing*, for which a handful of speakers import the /f/, the majority assimilate it to /p/, and two speakers produce both imported and assimilated tokens consecutively.<sup>86</sup>

	JL 18	AnB 18	SM 18	WD 18	PtP 18	AlsL 19	KN 21	MJ 22	AdB 23	AlxL 23	MK 24	KM 24	DM 26	DP 27	FN 27	OB 28	AM 31	PL 34	SJ 35	NP 35	JL 37	AIB 38	JD 40	PA 41
<i>fishing</i>	√	X	X				X	√~X	X	√	X	√~X	X	X	X	√	X			X			X	
<i>football</i>	X	X	X			X			X			X								X		X		X
<i>fridge</i>	√		√	√	√				√	√		√	√						√			√	√	√

**Table 6.4.3 Importation of /f/ in three lexical items. √ = imported token, X = adapted token; note for football two speakers produce both imported and adapted tokens.**

Table 6.4.3 shows careful speech data for speakers importing (√) or assimilating (X) /f/ in three lexical items. Speakers are arranged from left-to-right by age. For *fishing*, the word that produces variable results, there is no obvious correlation between age and phonological integration in this data. Therefore this does not

<sup>86</sup> One might expect that the ordering in such sequences would be an assimilated token followed by a imported token, with the speaker self-correcting to try to achieve a more correct rendering of what they recognize as an English word. But in fact the ordering is the reverse, as shown in the Table.

reveal any clues as to whether MP speakers are gradually importing more fricatives.

Lexemes that consistently import /f/, /s/, /ʃ/ give rise to the following contrasts:

<i>fritj</i> “fridge”	<i>pritj</i> ~ <i>britj</i> “bridge”
<i>finish</i> “finish”	<i>pirnpirn</i> “armband” (MP indigenous lexeme)
<i>seven</i> “seven”	<i>Tjebin</i> (language name)
<i>seip</i> “save”	<i>klinsheip</i> “clean-shaved”
<i>singten</i> “sink (down)”	<i>thingk</i> “think”
<i>shit</i> “shit”	<i>tjitj</i> “bacteria”
<i>she</i> “share”	<i>tje</i> “ear”

Why should some lexemes undergo /f/, /s/, /ʃ/ assimilation while others import these phonemes? One possible explanation might be the discourse frequency and/or historical depth of a borrowing – factors that I collectively refer to as borrowings being “well-established”. Muysken argues that in Media Lengua the more established Spanish borrowings are more likely to assimilate vowels (1997, p. 381). As mentioned above, for English borrowings in Canadian French, it has been shown that borrowings distributed among more speakers are more likely to be assimilated (Poplack et al., 1988). Unfortunately there is scarce historical data regarding the inception of borrowings, and my MKK corpus is not yet large enough to make sound conclusions about lexical frequencies or speaker distribution, so I cannot confirm or disconfirm these effects. But it is worth noting that kigay have characterised for me the way “old people” used to say *tjitjoklok* for “six o’clock”, whereas they now pronounce the same phrase with imported [s] fricatives.

Another influence may be whether words have been borrowed chiefly from English or Kriol language contact. However it is not clear in this case what sort of effects we should expect to see from borrowings via Kriol: Baker et al (2014) report that all fricatives are imported in contemporary Roper Kriol speech, while



other sources (Buchan, forthcoming; Jason Lee, 2002) report a mixture of imports and assimilations, and we might assume that older Kriol had more assimilation. In any case Kriol at Daly River and the Darwin town camps – the places where MP speakers are exposed to it – has not been documented, and is anecdotally claimed to exhibit regional differences from the Ngukurr variety (Munro, 2000: 250, citing Rhydwen, 1996).

The three imported fricatives /f/, /s/, /ʃ/ are all *strident* – that is to say, produce a high-pitched, perceptually intense turbulence – while the assimilated voiceless fricatives /θ/ and /h/ are non-strident. The greater perceptual salience of stridents might be taken as an *ex post facto* explanation of why some voiceless fricatives are imported and others aren't; but there is another explanation available regarding /θ/. Unlike other places of English fricative articulation, MP already has fricative allophones in the dental position, e.g. *patha* → [pɛθɛ] ~ [pɛθɛ] “good”. As mentioned above, for the MP voiced dental the fricative /ɖ/ → [ð] is the more common allophone, so English /ð/ can be imported as [ð], but thereby transparently integrated to MP /ɖ/, and perhaps occasionally pronounced using the [ɖ] allophone. For the voiceless MP dental /t̪/, the fricative is much the rarer allophone, but even so may be sufficient to encourage perception of English /θ/ as the MP obstruent /t̪/. Assimilated as such, it might therefore be realized with the more standard allophone [t̪].

/f/ and /s/ are only imported word-initially or medially, while in word-final position they are more solidly attested as assimilations /f/ → /p/ and /s/ → /c/ ~ /t/. There are some imported word-final /f/ attestations (*giraffe, cough*), but these are only in the careful speech, while the natural speech evidence (*stuff, half-half*) all points to assimilation to /p/. On the other hand /ʃ/ is imported word-finally in almost all instances, which includes a number of natural-speech tokens for *bush, rush* and *finish*. I would have predicted /ʃ/ to pattern with the other stridents /f/ and /s/ in this context (i.e. by assimilating to word-final /c/), and I have no ready explanation for why it is borrowed differently.

#### 6.4.2 Glottal /h/

/h/ is not a fricative in phonetic terms (Ladefoged & Johnson, 2011, p. 69), but is included in this section because it is usually classed as such phonologically. It is clearly in the assimilated category of English consonants, since I have no instances of it being imported in natural speech, and even in careful speech only a few speakers produce [h] in words such as *hat*, *hammer*, *hose*. For word-initial /h/ the most common realisation is as a glottal stop, e.g. *hat* → [ʔet].

Phonologically I interpret this as “zero” assimilation – i.e. indistinguishable from outright deletion – since glottal stops also appear at the onset of vowel-initial borrowings, either utterance-initially or following a vowel.

*hat* → *et* → [ʔet]

*arrow* → *ero* → [ʔerɔʊ]

*hammer* → *tju ema* → [cu ʔema]

*apple* → *mi epul* → [mi ʔepul]

MP lacks vowel-initial words with which we might compare hiatus resolution strategies, but Marri languages do have a few. Interestingly, Marri Tjevin careful speech recordings show that vowel-initial *arir* “nerite shell” has its onset marked variably with either a glottal stop, or the “fricative” [h] (CD, PSE). If Marri language phonology is to be credited with any influence on the integration of English into MKK, then perhaps the Marri marking of word boundaries with [h] encourages English /h/ to be interpreted as nothing more than a word-boundary marker. On the other hand, assimilation /h/ → ∅ may reflect borrowing sources in Kriol or non-standard Australian English varieties in which there is a zero realisation.

My natural speech data also includes a couple of instances in which /h/ is assimilated to unaspirated velar stops: *hose* → [kɔs] and *half-half* → [kapaf]. Presumably this indicates some acoustic similarity between glottal and dorsal articulation; but in any case it seems to be quite a rare integration pattern.

### 6.4.3 Bilabial and labio-dental obstruents

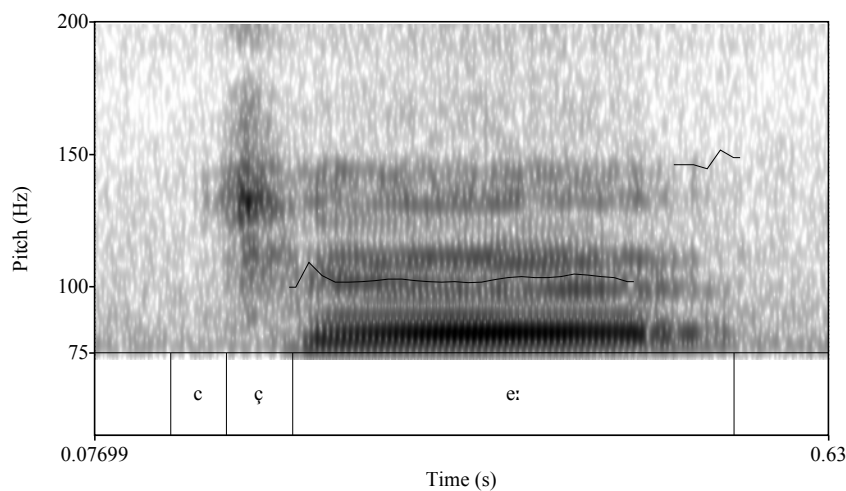
We will see in Chapter 7 that indigenous MP /p/ words have a substantial number of bilabial fricative [ɸ ~ β] realisations in MKK. In classifying English /f/ segments as imported or assimilated, I regard importation to have occurred only where a labio-dental [f] is pronounced, whereas I treat bilabial [ɸ] realisation as an assimilation to MP /p/. Under this interpretation, /f/ is imported word-initially for a number of English words with both careful and natural speech evidence (*finish, fly, flood, friend*), including by speakers who often pronounce /p/ → [ɸ] in indigenous vocabulary. That is to say, these MKK speakers maintain distinct pronunciations for labiodental [f] and bilabial [ɸ], though since the latter is merely an allophone of /p/, the phonemic contrast is not entirely dependent on the place distinction.

On the other hand, the presence of some /f/ borrowings that do assimilate to /p/, such as *football*, shows the potential for phonological merging of bilabial and labiodental obstruents. Further conflation is revealed in occasional instances of English /p/ words being borrowed with an “anti-assimilation” or “hyper-correction” /p/ → [f], e.g. *plate* → [fleit], *gap* → [gef], *goalpost* → [golfas]. In these words the English /p/, which is usually transparently integrated as MP /p/, is instead transformed into an unassimilated [f]. I have also encountered two examples of p/f metathesis in *ripoff* → [rifop] and *poofter* → [fupta].

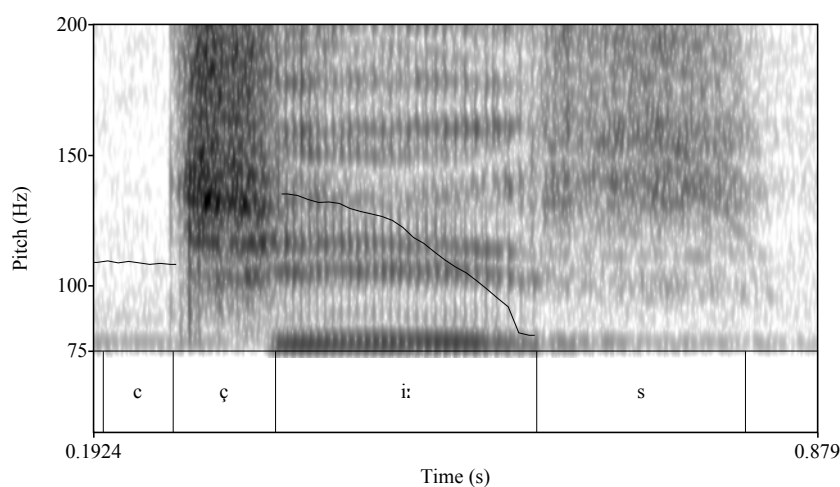
### 6.4.4 Affricates

Finally I turn to affricates /tʃ/ and /dʒ/, which I tentatively consider to be assimilated to MP palatal obstruents /c/ and /ɟ/, although in careful speech some distinction is maintained. In careful speech some speakers subtly distinguish the word-initial English /tʃ/ from MP /c/ with longer and more intense frication. For example Figure 6.9.1 shows a frication of 32ms in the MP

indigenous *tje* “ear”, while Figure 6.9.2 shows the same speaker fricating for 84ms in producing the borrowed *cheese*.



**Figure 6.4.1 Short frication on initial obstruent release in *tje* (PB, Butcher 1990)**



**Figure 6.4.2 Long frication on initial obstruent release in *cheese* (DP, PSE)**

Again, where English affricates are borrowed word-finally, some speakers in careful speech maintain a distinction from the MP palatal obstruent /c/. This is evident in the borrowing *bridge*, which most speakers pronounce with a fricated release [p.ʝitʃ], in contrast to indigenous words such as *tjitj* “maggots, bacteria”, which are pronounced with an unreleased final stop [cič̚]. The distinction is not maintained for all borrowings though: for *fridge* → [f.ʝič̚], most speakers do not

produce an affricated release, which I take as an indication that *fridge* is a more established and better assimilated borrowing than *bridge* (the first substantial bridge in the entire Daly region has only just been constructed in 2012).

However, there is only evidence for these palatal stop vs affricate contrasts in careful speech. My natural speech recordings simply do not contain many English affricate borrowings, and the examples I have found do *not* show a clear distinction from /c/ in frication length, though such subtle differences are more difficult to measure in noisier natural speech recordings. In the absence of further evidence, I hypothesise that this distinction is limited to careful-speech attempts to produce a more correct English pronunciation – which is nonetheless interesting in that it suggests *kigay* perceive a phonological difference between the more emphatic affrication of English /tʃ/ and the slight affrication of their own /c/.

The assimilation of the voiced English /dʒ/ is more definite. Without the long, intense frication of its voiceless counterpart, English /dʒ/ has little to distinguish it from the MP voiced palatal obstruent /ɟ/, which has brief frication, and may be realized with either pre-voicing, or with voicing commencing before the end of frication. The voiced /ɟ/ is itself rather marginal as a morpheme in standard MP (see §5.4.2), but is now reinforced in MKK by the influx of borrowings such as *jail, jeans, jungle*. Some speakers do continue to devoice /ɟ/ so that it is assimilated with the voiceless /c/ (as described in the next section); but there are enough voiced pronunciations in the data that I consider /ɟ/ to have phonemic status in MKK.

As foreshadowed in the methodology section above, the data on fricative integration is highly variable, and I have here made informal judgments about the significance of such variation. But there is clearly an avenue here for further research, in quantifying these dimensions of variability to further examine how foreign phonological material enters a language through lexical borrowings. This would require a greater number of speaker samples for borrowed words that

have near-minimal contrasts with indigenous MP terms, and more extensive natural speech data including such borrowings.

## 6.5 English voicing contrasts

Using a purely structural, feature-based description of phonological inventories, one might expect that English voiced/voiceless stops (/p/b, t/d, k/g/) would be transparently integrated into MP, where there are also voicing-contrasted obstruent pairs in each of these places of articulation (§5.5). However, this has not happened in a straightforward manner, which I will argue is because of phonetic differences in how the voicing contrasts are realized in the two languages. If this hypothesis is correct, it would show that the integration of phonological material from one language into another is sensitive to both feature contrasts *and* phonetic realisations. MP is thus in quite a different position from Kriol varieties, which integrate English voicing contrasts into substrate systems that lack voicing contrast, and lack word-initial obstruent contrasts altogether. Roper Kriol imports English voicing contrasts in the stop series, but not in the fricatives (Baker et al., 2014). On the other hand, for the mixed language Gurindji Kriol, voicing contrasts are merged (Jones & Meakins, 2013).

### 6.5.1 Word-initial voicing contrasts

Word-initially, Australian English voiceless stops are realized with VOT lags around 50–70ms, while voiced stops are realized with short prevoicing (/b/ around 10–30ms) or short VOT lag (/d/ and /g/ around 5–10ms) (Beach, Burnham, & Kitamura, 2001; Jones & Meakins, 2013). The sample of MP obstruent VOTs in §7.5.1 suggests that compared to English, there are shorter VOT lags for the voiceless series (around 10–50ms), and longer prevoicing (around 30–90ms) for the voiced series.

In MKK borrowings, English voiceless stops /p/, /t/ and /k/ are consistently transferred as voiceless MP obstruents (e.g. *picture* → /pica/, *toilet* → /tulet/, *car*

→ /ka/). This is not surprising, since although the VOT lags of MP obstruents are typically shorter, voiceless stops from the two languages are nonetheless quite similar, and there are no other candidate phonemes for assimilation into MP. But the borrowing of English voiced stops /b/, /d/ and /g/ exhibits great variation in VOT, with some tokens realized with the prevoicing typical of MP voiced obstruents, and others realized with the positive voicing lags typical of MP voiceless obstruents. For example *bed* → [bet] ~ [pet], *doll* → [dal] but *dinner* → [tina], *goal* → [kɔl] ~ [gɔl] ~ [gɔul]. I hypothesise that this variable integration into MKK occurs because word-initially the English voiced stops are phonetically somewhere in between MP voiced and voiceless VOT ranges.<sup>87</sup>

Figure 6.4.3 schematises the word-initial VOT contrasts of Australian English and MP bilabial stops/obstruents. Arrows running from the English phonemes to the MP phonemes show how the English stops have been integrated into MP phonology, with /p/ → /p/, and /b/ → /p/ ~ /b/.

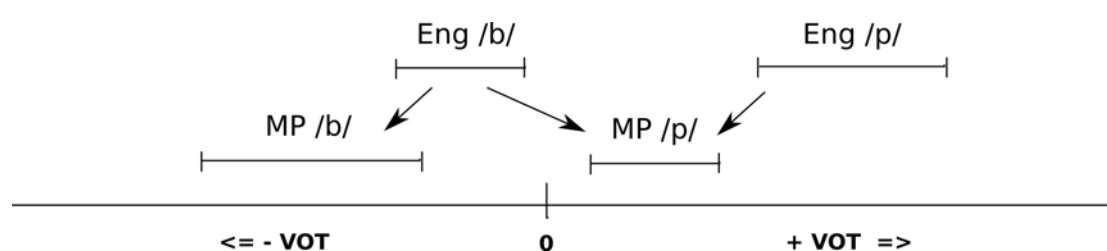


Figure 6.5.1 Transfer of English bilabial stops into MP phonology

An example of this can be seen in MKK tokens of the word *bed*. Based on studies cited above, we would expect English tokens of this word to have short prevoicing around 10–30ms, which falls somewhere between the MP /p/ and /b/ categories. In MKK careful-speech pronunciations we find a very wide range of both positive and negative VOT values (i.e. voicing lag and prevoicing), with a

<sup>87</sup> An alternative hypothesis suggested by Jane Simpson (*p.c.*) is that words such as *bed* → /pet/ have been borrowed via other Aboriginal languages in which there is no voicing distinction.

sample of 5 tokens from 4 speakers measured at -147ms, -83ms, +18ms, +55ms, +56ms.<sup>88</sup>

As we saw above with the variable importation/assimilation of fricatives, the variable transfer of English voiced stops has strong lexical factors. For example, in careful speech *dinner*, *bed*, *glass* and *tobacco* (→ [peka]) are often borrowed as voiceless obstruents, while *dancing* and *bomb* are quite consistently borrowed as voiced, and *goal* is variably voiced (more on this below). Again, the historic longevity of borrowings seems a likely explanation for this lexical specificity. *Dinner* is attested as an early borrowing, and one which underwent substantial semantic shift to mean “midday, sun” (Street, 1987; Walsh, 1976), while *tobacco* is widely cited as one of the early motivations for Aboriginal people to join whitefella settlements (e.g. Stanner, 1958). If it is indeed the case that earlier borrowings are more likely to be transferred from voiced to voiceless categories, this would suggest that earlier borrowings were interpreted based on their phonetic characteristics, while more recent borrowings are interpreted based on their structural contrast as “voiced” stops, despite the fact that their actual phonetic voicing may be closer to the MP voiceless category.

Word-initial /g/ is a rather different case from /b/ and /d/, since TMP has only /k/ word-initially. Careful speech data for *gorilla* and *goal* suggests that the former is quite consistently assimilated to [k], while the latter is variably assimilated to [k] or “imported” as [g], although the latter is a sort of structural, rather than phonetic, import – since the English /g/ source for these is in fact a short-lag “unaspirated” [k], perhaps phonetically somewhat closer to TMP /k/ than to the properly pre-voiced [g] tokens produced by some kigay. Figure 6.5.2 shows the VOT distribution of 9 *goal* tokens and 5 *gorilla* tokens sampled from the data.

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<sup>88</sup> Tokens sampled from KM, PA, JD, and two tokens from KN.



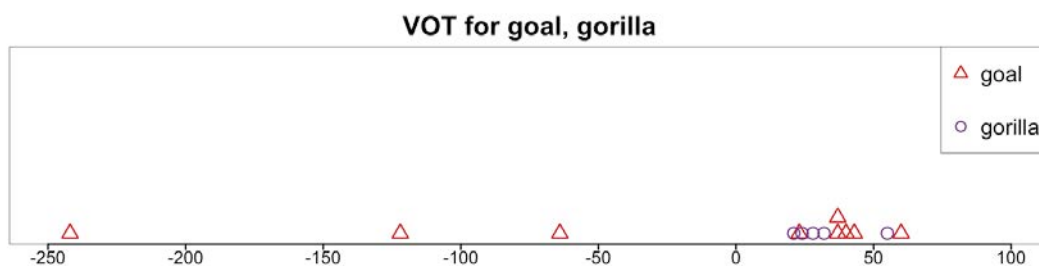


Figure 6.5.2 Some examples of VOT for *goal* and *gorilla* in MKK

The tokens represented here are from 6 speakers, and those who produce a voiced [gɔl] produced a voiceless [kɔ.ɹɪla]. Further, one speaker (DP, age 27) produces two consecutive tokens of *goal*, one voiced and one voiceless. My impression is that in natural speech there is a more consistent adaptation of word-initial /g/ to voiceless MP /k/, but this could only be proven with higher-quality recordings of natural speech.

### 6.5.2 Word-medial and word-final voicing

Word-medial and word-final stops can be dealt with more briefly: in the former case because there is limited evidence available, and in the latter case because there is a generalized merger. Voiceless stops are again uncomplicated, as they integrate transparently to MP voiceless obstruents both word-medially (*paper*, *hunting*, *mechanic*) and word-finally (*clap*, *hat*, *truck*). Voiced stops do not occur word-medially or word-finally in many borrowings, but what evidence there is points to transparent word-medial integration (e.g. *mobile phone*), and word-final assimilation to MP voiceless obstruents, which are the only obstruents MP allows in syllable codas (§5.4), e.g. *flood* → [flat].<sup>89</sup>

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<sup>89</sup> Note however that English word-final “voiced” stops are signalled through preceding vowel lengthening, rather than actual voicing in the stop. My careful speech data includes one token of *bag*, and this is indeed produced with a lengthened vowel [be:k], suggesting a possible re-analysis in MKK. However no conclusions can be drawn from a single careful-speech token.

One complication for this analysis is intervocalic /t/ or /d/, both of which are often reduced to alveolar flaps in Australian English, e.g. *forty* → [fo:ri], *speedy* → [spiri]. This complicates the analysis of borrowings in MKK because MP phonology has an intervocalic contrast between a voiced obstruent /d/ and a flap or trill /r/, which when realized in its flap allophone [ɾ] is acoustically similar to a /d/ segment, but with a shorter closure duration. When Australian English flapped /d/ is borrowed, it is produced as a brief alveolar closure, such that quantitative analysis of MP intervocalic [d] versus [ɾ] closure durations would be required to decide which category the borrowing more closely resembles. However even if English flapped borrowings do turn out to have a very short closure suggesting flapping, they would nonetheless remain phonologically distinct from MP /r/ in that borrowings like *forty* and *speedy* are never pronounced with the trill allophone that /r/ permits. Based on this evidence, I tentatively interpret these borrowings as assimilated to MP /d/.

As with the integration of fricative phonemes in the previous section, the variable transfer of English voicing contrasts into MKK warrants further quantitative research. In particular, a more extensive study of English word-initial voiced stops borrowed into MKK might show how lexical, speaker and speech style factors influence the variable VOT realisation of these stops, and how this compares to the VOT used for indigenous MP words in the same speakers / speech-styles.

### 6.5.3 Enhanced MKK consonant inventory

Table 6.5.1 shows the MKK consonant inventory with new phonemes added via English/Kriol borrowings. As described in the sections above, three fricative phonemes are added via borrowings such as *flood*, *start*, *share*, though the voicing contrasts of English fricatives are not imported into MKK. The previously marginal /ʃ/ now has more solid phonemic status, thanks to borrowing such as *jail* and *jungle*.

	PERIPHERAL						
	LAMINAL					Palatal	Velar
	Bilabial	Labio-dental	Dental	APICAL			
Alveolar				Retroflex			
Voiceless stop*	p <p>		t̥ <th>	t <t>	ɽ <rt>	c <tj>	k <k>
Voiced stop	b <b>		d̥ <dh>	d <d>	ɖ <rd>	ɟ <dj>	g <g>
Fricative		f <f>		s <s>		ʃ <sh>	
Nasal	m <m>			n <n>	ɳ <rn>	ɲ <ny>	ŋ <ng>
Lateral				l <l>	ɭ <rl>		
Rhotic trill / flap				r <rr>			
Approximant	w <w>			j <y>	ɻ <r>		

**Table 6.5.1 MKK consonant phonemes**

\* Note change in labelling from TMP “obstruent” (where stop/fricative/affricate manner is not contrastive) to MKK “stop”

## 6.6 Vowel integration

In this section I investigate the transfer of English vowels via lexical borrowings into MKK. TMP has just four vowels, /a, e, i, u/, which are generally realized approximately as [e, ε, i, u] (§5.2). Australian English has a much larger vowel system with 12 monophthongs (counting schwa) and 5 diphthongs (Harrington, Cox, & Evans, 1997, p. 178). Of these, just one monophthong, /ɔ/, and two diphthongs, /æɪ/ and /æe/, are imported into MKK in natural speech; the remainder are all assimilated to the four MP vowels, or merged with /ɔ/.

I discuss the vowels in turn according to three English phonological class divisions: lax monophthongs, tense monophthongs, and diphthongs. The first class mostly integrates transparently into MKK, while the latter two classes must be

either imported as new phonemes, or assimilated by merger to qualitatively different vowels.

### 6.6.1 Lax monophthongs

	<i>Examples</i>	<i>Imported</i>	<i>Assimilated</i>
ɪ (hid)	bicycle, bitumen, fridge		i
ʊ (hood)	football, cooking		u
e (head)	bed, friend		e
ɔ (hod)	body, bomb, borrow, cough, doll, worry	ɔ	a
ɐ (hud)	cup, flood, ganja		a
æ (had)	arrow, bag, clap, hammer, hat, Tarax	æ (careful only)	e

**Table 6.6.1 English/Kriol lax monophthong borrowings**

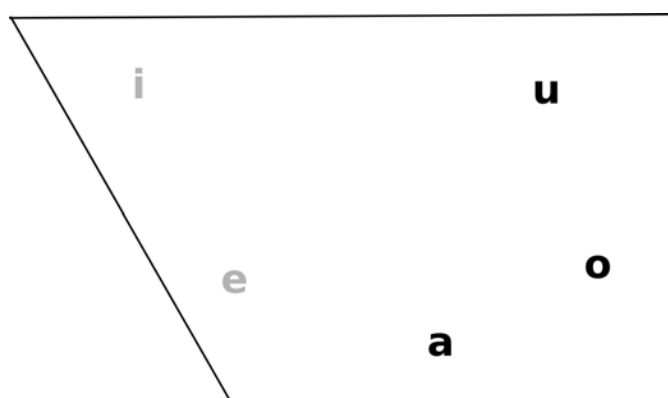
These short, simple vowels are phonetically the most similar to MP vowels, and therefore are mostly integrated transparently. This is true of the English /ɛ/, /e/, /ɪ/, /ʊ/, which map neatly onto the four indigenous MP vowels to which they are phonetically similar, e.g. *cup* → /kap/, *friend* → /fɪɛn/, *fridge* → /fɪɟɪc/, *cooking* → /kuki/. (Note that with fewer contrasts to be distinguished in MP, I represent the indigenous vowel phonemes with the standard Latin graphemes /a/, /e/, /i/, /u/.)

This leaves the English /æ/, which assimilates to MP /e/; and /ɔ/, which is imported into MKK as a distinct phoneme. The former is somewhat variable in careful speech, with different speakers either importing or assimilating, e.g. *hat* → [hæt] ~ [ʔet], however in natural speech I have not found any instances of importation, so I consider this phoneme to be assimilated. On the other hand English /ɔ/ may be imported in both careful and natural speech, though there is some variability among speakers and lexemes.

Lexemes that consistently import /ɔ/ give rise to the following contrasts:

*kof* “cough”    *kap* “cup”    *kupkup* “soft”  
*bom* “bomb”    *bamam* “white”    *pumam* 3pl.hands(8)

The contrastive position of the new vowel in MKK vowel space can be schematized as in Figure 6.6.1; I represent the new phoneme in MKK as /o/, in keeping with my general use of common Latin graphemes. Of course, a much larger number of tokens, and a speaker normalization calculus, would be required to more conclusively demonstrate the phonemic contrast of these vowels.



**Figure 6.6.1 Schematic representation of new /o/ phoneme in MKK vowel space**

As noted above, the importation of /ɔ/ does not occur in all lexemes, with many examples of assimilations to /a/, e.g. *body* → /badi/, *doll* → /dal/, *worry* → /ɹa.ɹi/. But there are also many imported tokens /ɔ/ → [ɔ], in both careful and natural speech (e.g. *involve* → [inbɔl], *time-bomb* → [taimbɔm]). These indicate that some speakers at least use this as a distinct and contrastive vowel phoneme.

For the two English lax vowels /ɔ/ and /æ/ that don't transparently fit into the MP system, it is interesting to note that MKK imports the former but not the latter. This may indicate that in the low-back area there was “more room” to add a new vowel, whereas in the low-front area there is little room to add a distinctive /æ/ vowel between /e/ and /a/. It is also worth noting that quite a

few northern Australian languages have five-vowel systems described as /ɪ ɛ ɐ ɔ ʊ/, or some close variant thereupon, and none is reported to have a mid-front/low-front contrast like e/æ (Butcher & Fletcher, 2014, p. 3). I also note that the same integration pattern for lax monophthongs appears in Kriol varieties (Jones et al., 2012; Sandefur, 1984). This might be taken as evidence that Kriol has played a role in the diffusion of these borrowings into MKK, but likely shows that languages with similar vowel phonologies have similar outcomes in the integration of English vowels.

### 6.6.2 Tense monophthongs

	<i>Examples</i>	<i>Imported</i>	<i>Assimilated</i>
i: (heed)	three, cheese, clean, feel, jeans, kidney	i: (careful only)	i
ɜ: (who'd)	ballo <b>o</b> n, bitu <b>u</b> men, brand <b>n</b> ew, two	ɜ: (few lexemes)	u
ɜ: (heard)	learn, work		e, u (natural only)
o: (hoard)	basketball, cordial, door, football, four, forty, recording	o (new allophone)	u ~ ɔ
ɛ: (hard)	basketball, car, cards, giraffe	ɛ: (few lexemes)	a

**Table 6.6.2 English/Kriol tense monophthong borrowings**

All English tense monophthongs are merged with their lax counterparts when integrated into MKK in multisyllabic or in closed-syllable words. In open monosyllables, however, tense monophthongs maintain their lengthened character, though this can also be interpreted as transparent integration in most cases, as discussed below. For Kriol varieties the same pattern of assimilation is documented (Sandefur, 1984).

/i:/ and /o:/ are imported even in closed syllables in some instances of careful speech (as in *cheese* → [tʃi:s], *forty* → [fo:di]), but I will set this aside as an effective code-switch to English and focus here on phenomena supported by natural speech evidence.

The tense /i:/ and /e:/ are usually assimilated. In multisyllabic words, and closed monosyllables, they merge with English lax /ɪ/ and /ɛ/ to assimilate to MP /i/ and /a/ respectively. They lose the distinctive length that they have in English, and for i:/ɪ the difference in vowel quality is collapsed. Thus *feel* → /fiɪ/, *kidney* → /kitni/, *cards* → /kat/, *giraffe* → /ʝuɫaf/. I have encountered just two exceptions where /e:/ is imported: one the multisyllabic *smart-arse* → [spateɜ:s] (see also §6.7.2), where only the second vowel maintains length; the other in a closed syllable *half* → [ɛ:p], which might almost generate a minimal pair with *up* → /ap/, except that the latter only seems to be borrowed in compounds such as *right up* → /raitap/, *top up* → /topap/, where it does not have the status of an independent word.

In open monosyllables /i:/ and /e:/ *do* maintain English-like length, though this does not import anything new to MP phonology, since the MP /i/ and /a/ vowels also have these qualities in open monosyllables (§7.2, §7.7.1). Thus *three* → /t̥ɹi:/ → [t̥ɹi:], *car* → /ka/ → [kɛ:].

When we turn to English /ɜ:/ and /o:/, we find that for open monosyllables they are integrated in ways that do produce new phones – but these are arguably allophones of the indigenous /u/, and the newly imported /ɔ/, respectively. In multisyllabic words these phonemes, like all tense vowels, are merged with lax vowels. /ɜ:/ is assimilated to /u/ as in *balloon* → /blun/ → [blun]; /o:/ is variably assimilated either to the MP /u/, or to the new /ɔ/ phoneme, as in *cordial* → /kudijel/ ~ /kɔdijel/.

The open monosyllabic realisation of /o:/ is not always imported (there are instances of *door* → /duwa/), but there are a few natural speech instances of faithful importation in *four* → [fo:]. However, since this only occurs in open monosyllables, and the imported /ɔ/ is *never* borrowed in open monosyllables (since lax vowels never appear here in English), the two are in complementary distribution and can be treated as a single new phoneme, which I represent as /o/:

/o/ → [o:] / #C\_# (from English /o:/ only)  
 [ɔ] / elsewhere (from both English /ɔ/ and /o:/)

The open monosyllabic realisation of /ɜ:/ is imported faithfully in all instances I have checked, i.e. *two* → [tɜ:], *glue* → [glɜ:], *you* → [yɜ:].<sup>90</sup> Impressionistically this vowel appears to have a distinct quality from the MP /u/, which in open monosyllables is lengthened, but in quality remains similar to the shorter version, i.e. *du* → [dɜ:] “cry”. This does suggest then a phonemic contrast, and a new vowel introduced to MKK, but one which appears only in open monosyllables, and has only one really common lexical exponent, namely *two*. (This word is indeed quite common, since the indigenous MP number system has been replaced altogether by borrowing the English system.) There is also a problem in checking evidence, as indigenous MP /Cu/ monosyllables are not common,<sup>91</sup> and I have none in my careful speech recordings. Further data would be required to establish the vowel distinction on acoustic measurements; given the data currently available I classify /ɜ:/ as a “marginal” phoneme in MKK.

### 6.6.3 Diphthongs

	<i>Examples</i>	<i>Imported</i>	<i>Assimilated</i>
æɪ (hay)	cane toad, jail, make up, paper, tape	ei	
əʊ (hoe)	arrow, cane toad, disco, hose, mobile phone	ɔu (careful only)	ɔ ~ a
ɔɪ (hoy)	schoolboy, boys, toilet	? ɔi ~ ui	u, uj
ae (high)	bicycle, design, fly, knife, like, mobile phone, time, try	ai	a ~ u, aj
æɔ (how)	find out, power, shout, sink down, trousers		a ~ e

**Table 6.6.3 English/Kriol diphthong borrowings**

<sup>90</sup> E.g. AB, VS-2.6; MK 2011-08-24; GM 2011-08-24. I have also encountered a faithful import in *brand new* → [preɪnɜ:] (WL, 2012-06-02), though it is not clear to me whether this should be interpreted as one word or two.

<sup>91</sup> This does not include the frequent noun classifiers *tju* WEAP and *ku* ANIM, since in their classifier role they have short vowels. They are only pronounced with long vowels when they are used as independent generic nouns – which is rather less common (§5.7.1).



Of the five diphthongs that feature in English/Kriol borrowings,<sup>92</sup> those with a front offglide [ɪ] or [e] are imported into MKK (e.g. *paper* → /peipa/), while those with a back offglide [ʊ] or [ɔ] are assimilated (e.g. *float* → /flot/), essentially by losing their offglides. The importation of front-offglide diphthongs is facilitated by the fact that MP has the [j] glide as a (consonantal) syllable coda (*kigay* “boy”, *mardinybuy* “girl”), while importation of back-offglides is constrained by the fact that MP /w/ does *not* appear in syllable codas. Therefore the phonetic sequences [ei] and [ɔi] are indigenous to MP, but in terms of phonological structure they are vowel-consonant sequences, rather than complex nuclei. In English/Kriol borrowings however the same sequence does function as a complex nucleus – i.e. a diphthong – because some have other consonants in the coda position: *cane toad* → /kein.tot/, *time* → /taim/.

Note that MP has only /Caj/ and /Cuj/ syllables, but no /Cej/; yet nonetheless the /ei/ diphthong is also imported.

The /æɪ/ and /æe/ diphthongs are both imported quite consistently into MKK as new vowel phonemes. My auditory impression is that their nucleus and offglide positions are rather different in MKK compared to Australian English, though an acoustic examination of vowel qualities is beyond the scope of this chapter. In MKK I represent them as /ei/ and /ai/ respectively. Thus *tape* → /teip/, *make up* → /meikap/, *design* → /disain/, *knife* → /naip/. I know of just a few cases of assimilation for /æe/ – the presumably old borrowing *bicycle* → /pucɪŋkul/, and the much newer, but extremely common *mobile (phone)*, which is variably /mobul/ ~ /mabul/ ~ /mabal/.<sup>93</sup> The latter is an interesting case in that it has

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<sup>92</sup> I set aside here the “falling diphthongs” /ɪə/, /eə/, /ʊə/, since in Australian English they are often produced as monophthongs (*weird* → [wɪ:d]) or disyllables (*fear* → [fɪjə]) (Harrington, Cox, & Evans, 1997, p. 174); neither do I consider the /ɪʊ/ sequence as in *cute*, which is only treated as a single segment by some linguists (Ladefoged & Johnson, 2011, p. 93), and in any has very scarce borrowing evidence in MKK.

<sup>93</sup> For Roper Kriol, Baker et al (2013) report the more faithful import *mobailfoun*, though it is not clear whether this form appears in both careful and natural speech.

undergone the sort of vowel assimilations normally associated with early borrowings, when it is clearly a very recent borrowing.

The /ɔɪ/ diphthong is more variable in its importation/assimilation, and when it is imported, its onset can be closer to either the indigenous /u/ (e.g. *toilet* → /tuilet/), or the borrowed /o/ (e.g. *boys* → /bois/). When it does assimilate, it is to a simple /u/, as in *toilet* → /tulet/. The borrowing of /ɔɪ/ in open syllables assimilates to the indigenous /Cuj/ structure, as in *schoolboy* → /kulbuy/; similarly the borrowing of /æ/ in open syllables can be regarded as a transparent integration to /Caj/, with minimal phonetic modification required, as in *try* → /tɹaj/. While /ei/ and /ai/ are extensively evidenced as new phonemes in natural speech, there is only occasional evidence for a /oi/ or /ui/ diphthong – and much more frequent examples of assimilations. Given the current evidence, the importation of /ɔɪ/ might still be regarded as a code-switching effect.

As mentioned above, the back-offglide /əʊ/ and /æɔ/ diphthongs are not imported into MKK at all in natural speech. I have only found them being imported in careful speech, and even then many speakers assimilate them, usually as /əʊ/ → /o/ and /æɔ/ → /a/ ~ /e/. Thus *hose* → /kos/ (i.e. [kɔs]), *cane toad* → /keintot/, *mobile (phone)* → /mabal/, *find out* → /faindat/, *sink down* → /siŋten/.

I hypothesise that these diphthongs have been assimilated much more than the others because they lack indigenous phonetic models for their backed offglides. The simple vowels to which they are assimilated are somewhat variable, but hover somewhere around the onset points of the source English diphthongs. Therefore they can be regarded as assimilating by losing their offglides.

### 6.6.4 Schwa

ə (comma)	balloon, gorilla → [∅]
	boomerang, toilet → [ə]
	colour, dinner, hammer, paper → [e]
	mattress, mechanic → [ɪ]
	giraffe → [ʊ]
	refrigerator → [p.ɪ'ʒədə]

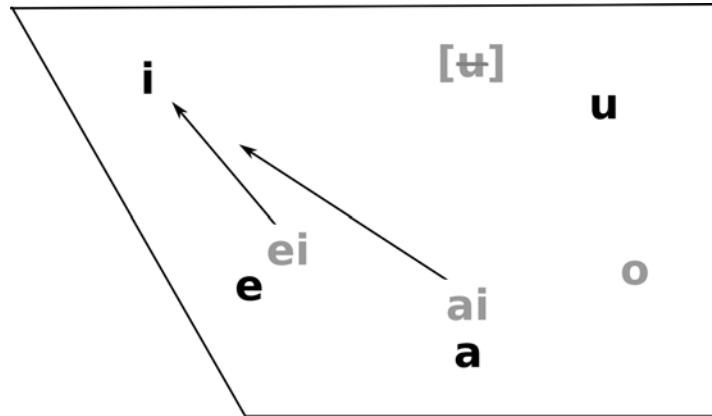
**Table 6.6.4 English/Kriol schwa borrowings**

Finally, and briefly, English schwa is transferred very variably, sometimes appearing as a central [ə], but elsewhere assimilating to /a/, /i/ or occasionally /u/, and in some words being deleted altogether (*balloon* → /blun/).

The MP /a/ is sometimes realized as quite a short central vowel in (unstressed) open final syllables, so it is natural that schwa should assimilate to this vowel in disyllabic English borrowings with an open second-syllable schwa: *colour* → /kala/, *dinner* → /tina/, *hammer* → /ema/. Elsewhere some closed-syllable borrowings may be realized with a centrality that would not be typical of MP /a/ in this context, e.g. *boomerang* → [pʊmə.ɹɛŋ], though the difference from an MP /a/ remains subtle, and could not be established conclusively without acoustic testing. There are other lexemes where schwa assimilates to /i/, presumably under the influence of neighbouring front vowels and/or palatal consonants, e.g. *mattress* → /metɹɪk/, *mechanic* → /mikenik/. In summary, there is little evidence for schwa being imported into MKK as a new central vowel.

### 6.6.5 Enhanced MKK vowel inventory

Figure 6.6.2 summarises some of the findings above by showing the MKK vowel inventory as enhanced through English/Kriol lexical borrowings. The /ɥ/ vowel, as described above, has a rather marginal status indicated by phonetic brackets [ɥ]. Both this marginal phone, and the better attested new phonemes, are distinguished by grey colour.



**Figure 6.6.2 MKK vowel space with one new monophthong and two diphthongs added via English/Kriol**

Figure 6.6.2 also shows the practical orthographic form that is used for the MKK vowel phonemes in this thesis. The marginal /ɥ/ phoneme is not orthographically distinguished from /u/, since its lexical exponents are too few to warrant a separate spelling convention, and there is no minimal pair.

### **6.7 Phonotactic integration**

As described in §5.6, the MP syllable is CV(C)(C), with various restrictions on which consonants can be word-initial and syllable-final. The English/Kriol borrowings in MKK preserve restrictions on syllable codas, but radically expand the variety of word and syllable onsets available. Vowel-initial and /ɹ/-initial words are added, and the full range of English 2- and 3-consonant onset clusters are permitted.

With English/Kriol borrowings taken into account, MKK syllable structure can be expressed as:

$$(C)(C)(C)V(C)(C)$$

Where:

- Syllable coda restrictions are the same as for standard MP (§7.7), except that the import /f/ now appears as a simple coda. There are no new coda clusters.
- Word-initial consonants are the same as for standard MP, except that /ɹ/ is now also permitted, both as a simple onset and in clusters (see below).
- Onset clusters have essentially the same possibilities as English: /CL/ (voiceless Consonant + Liquid), /Cw/, /sC/, /sN/ or /sCL/. Note however that /sCL/ may be quite rare, and some exceptions involving clustered continuants are noted below.

Evidence for these formulae is presented in the sections below.

#### 6.7.1 Restrictions on syllable codas

The maintenance of a restriction against voiced obstruents as syllable codas has already been described in the section on voicing contrasts above. As for the restriction on /ɹ/ as a coda, this is not challenged by Australian English borrowings, since Australian English is non-rhotic, and the linking /ɹ/ found in Australian English (e.g. *far out* → [fɛ:ɹæʊt]) is barely available for integration since most borrowing is of single words.<sup>94</sup>

English does present a range of coda clusters that are not permitted by the TMP formula {{lɹ}{kŋm}}, with the range covering many combinations from liquid/nasal + obstruent + s/z. Many such combinations are not evidenced in the borrowing data, but from those that do appear, it seems clear that non-MP clusters are assimilated by deleting all but the first segment:

**friend** → /fɹɛn/

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<sup>94</sup> Quite a few phrasal verbs are borrowed, and behave as single phonological words in MKK (e.g. *give up* → /gɪbap/); but as it happens none that I have so far observed has a linking /ɹ/.

taste → /teis/, fast → /faswan/

cards → /kat/

Tarax<sup>95</sup> → /terek/

underpants → /andapen/

There is one word with a coda cluster that has been assimilated on a different pattern, changing the /ks/ sequence to a /c/.

Hilux → /ailac/

The reason for this assimilation, in contrast to the /ks/ → /k/ simplification of *Tarax*, is unclear, though it may signal a different borrowing path via Kriol or Aboriginal English.

The fact that it is *non-MP* coda clusters which are simplified, rather than borrowed coda clusters in general, is clarified by evidence from borrowed words containing coda clusters that are permitted by the standard MP formula<sup>96</sup>:

think → /tɪŋk/

milk → /milk/

### 6.7.2 Importation of onset clusters

While MP restrictions on coda clusters have been maintained, syllable onset clusters are generally imported into MKK. On the one hand this may seem odd given that standard MP already allowed some coda clusters, but no onset

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<sup>95</sup> Tarax is an Australian drinks brand that was sold at the Wadeye shop long enough to be borrowed as the word for fizzy sweet drinks in general, *kura terek*. The brand is no longer sold in Wadeye, but the borrowed word persists.

<sup>96</sup> There is also a rather unusual borrowing in which a coda cluster is created where none was present in the source: *work* → /wulɤk/. Similar phenomena for both *work* and *turkey* assimilation occur in other Aboriginal languages (Jane Simpson, Patrick McConvell *p.c.*).

clusters. But on the other hand, onset clusters are considerably more common typologically than coda clusters (Donohue, Hetherington, McElvenny, & Dawson, 2013).

The following English onset clusters are imported faithfully in MKK (allowing for some obstruent voicing recategorisations as described in §6.5.1).

CL

plate → /pleit/

clap → /klep/

glass → /klac/

bridge → /p.ɹic/

truck → /t.ɹak/

freaking out → /f.ɹikinet/<sup>97</sup>

Cw

twenty → /tweni/

quicksand → /kwiksen/

sC

scary → /ske.ɹiwan/

speedy → /spidi/

stuff → /stap/

escape → /eskeip/

sN

sniper → /snaipa/

smart-arse → /spadas/<sup>98</sup>

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<sup>97</sup> This is used as an adjective, meaning “very stoned”.

<sup>98</sup> I have identified only this one token of /sm/ onset integration (JL, 2013-06-22). Further data would be required to show whether the de-nasalisation /sm/ → /sp/ is a regular pattern.

sCL

spray → /sprei/

The importation of these onset clusters is almost categorical; I know of just three lexical items that defy the trend:

flour → /lawam/

schoolboy → /kulbuy/

spoon → /pun/

*Flour* → /lawam/, in which the final /m/ is quite mysterious, is certainly among the oldest borrowings, being one of the core cultural artefacts of the early Mission (Pye, 1972). *Schoolboy* → /kulbuy/ may also be a relatively early borrowing, since schooling for all children was another of the Mission's first priorities. These exceptions suggest that there may have been a brief period at the beginning of intensive English contact when (some) onset clusters were *not* imported – though the range of well-established borrowings in which clusters are maintained shows that this can not have lasted very long.

There are however two onset clusters, /stɹ/ and /sw/, which undergo some form of assimilation. The first of these merges its first two segments into a palatal affricate, giving /stɹ/ → /cɹ/, as in *straight* → /cɹeɪt/ (KM, 2012-06-20\_28), perhaps under the influence of Australian English /tɹ/ → [tʃ]. This cluster also provokes the sort of phonological conflation reported above for p/f in cases like *gap* → /gef/, whereby non-MP material is sometimes “imported” even though it didn't exist in the source form. I have noticed this particularly for the borrowing *tribe* → /stɹaɪp/ (DM, MG, 2012-08-24), which may involve a semantic conflation.<sup>99</sup> As for /sw/, it merges with the imported fricative /ʃ/, as in *sweet* → /ʃɪtʃɪt/, though in conversation I believe that I have also heard a reduction to

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<sup>99</sup> *Tribe* has elsewhere been assimilated in a merger with *stripe*, perhaps because of conceptual links between clan affiliation and ceremonial body painting (Jane Simpson, *p.c.*).



/w/, in the form of *sweat* → /wet/. It is perhaps not surprising that these two clusters in particular are not imported. For /sw/, the lip rounding phonologically encoded as a second segment makes the gesture confusable with /ʃ/, which has more lip rounding than /s/ (Ladefoged & Johnson, 2011, p. 66). /stɹ/ also seems easily confusable, since it crowds the representation of three alveolar consonants into one complex gesture.<sup>100</sup>

### 6.7.3 Initial /ɹ/ and vowel-initial words

The other new word-onset patterns borrowed from English are those with “rhotic” approximant /ɹ/, and vowel-initial words:

road → /ɹut/

red → /ɹedwan/

really → /ɹiliwan/

right → /ɹait/<sup>101</sup>

understand → /andasten/

easy → /isi/

age → /eic/

The English apical approximant /ɹ/ is usually characterized as being “rhotic”, and does not necessarily involve tongue retroflexion (Ladefoged & Johnson, 2011, p. 94), while the MP /ɹ/ has been characterized as retroflex. Whatever the

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<sup>100</sup> I could not find any data on whether /stɹ/ causes specific difficulties for L1 acquisition. McLeod et al (2001, p. 104) confirm that /sCɹ/ is the latest cluster type to be acquired in English, but do not indicate whether there are any differences between /spɹ/, /skɹ/ and /stɹ/.

<sup>101</sup> There is also an English borrowing that has initial /ɹ/ even though this is not present in the source: *own* → /ɹun/, used in the sense of exclusive personal associations of possessions. E.g. **Krup run** *Megadet kanyi-ngu* “Megadeth have their **own group** over here” (DP, 2011-09-01). This is also found in Kriol (McConvell, *p.c.*), which may indicate that MKK has borrowed it via Kriol. I hypothesise that the initial /ɹ/ has come about through reanalysis of phrases such as “their **own**”.

actual tongue gestures in one or the other, these segments are similar enough that English /ɹ/ has been assimilated to MP /ɻ/ without any discernable phonetic difference between the borrowed segments (as in *berry*, *worry*) and comparable indigenous forms (as in *beré* “okay”, *dara* “mangrove”). Given that MP has retroflex obstruents /t/, /ŋ/ etc in word-medial and word-final positions, but only alveolar equivalents /t/, /n/ etc word-initially (§5.7), it is an interesting question whether the retroflex approximant /ɻ/, moving into word-initial position thanks to borrowings, produces a similar pattern of reduced or absent retroflexion. My impression is that this is *not* the case: word-initial /ɻ/ in borrowings such as *road* sounds markedly retroflex to me, and perhaps somewhat more retroflex than it would be in the source Australian English form. However, detailed acoustic or articulatory study would be required to answer this question definitively.

As for vowel-initial words, they are, like the /h/-initial borrowings described above, usually realized phonetically with a glottal stop as the word onset (e.g. *understand* → [ʔandastən]). I have argued above for an interpretation of this as a word-boundary marker, rather than a segmental phoneme.

#### 6.7.4 Syllabic consonants

A final brief point is that English can be analysed as having syllabic lateral and nasal consonants, as in *bubble* /bɒbəl/ and *button* /bʌtən/. But when these words are borrowed in MKK they have clear syllabic vowels:

jungle → /ʔaŋgul/

prison → /prisan/

### 6.8 Summary

In this chapter we have seen that lexical borrowings have introduced substantial new structures into the MKK phonological repertoire. The major new features

are fricatives, diphthongs, and syllable onset clusters. The integration of foreign forms in a language may in turn have knock-on effects on indigenous phonological structures (Weinreich, 1953, p. 24; citing Martinet, 1952). There is no evidence of such effects in MKK, though perhaps this is a diachronic process that needs much longer to gestate.

The new phonological material in MKK is for the moment evident only in borrowed forms, which calls into question the status of this material with respect to the MKK “phonological system”. However I have argued against the interpretation of “two phonological systems” (Bakker, 1997), in view of the fact that borrowed phonological material appears in words that in other ways exhibit indigenous MP phonological patterns.

## Lenition of /p/ and /k/

### 7.1 Introduction

This chapter investigates a sociophonetic variable in Murrinh Patha, and is to the best of my knowledge the first quantitative, sociophonetic investigation of an Australian Aboriginal language.<sup>102</sup> The variable in question is the realisation of voiceless peripheral obstruents (/p/ and /k/), which are canonically realised as stops, but may also be lenited to fricative, approximant or zero realisations.

The environment for lenition is the syllable onset position, with lenition favoured where the preceding segment is a vowel or liquid, and where the following vowel is a back vowel. Lenition is also favoured when the obstruent is the onset of a stressed syllable, usually word-initial, which is typologically unusual in global terms, but very characteristic of Australian phonologies. Typical environments favouring lenition are illustrated in examples 7.1.1–2:

- (7.1.1) nyinyi **k**ardu      binyi=warda tji-nu      → [ɲiji **ɣ**aɖu 'biɲiwaɪa 'zi:nu]  
 2s      PERS      whole=IMM      2S.SIT(1).FUT-FUT  
*you'll be unhurt*      (KB, Walsh 1986 Tape 57)

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<sup>102</sup> There are however other studies that study quantitative variation in Australian Aboriginal languages with a focus on change on progress, rather than social structure. These are mostly on the new mixed languages Gurindji Kriol and Light Warlpiri, and include studies of ergative marking (Meakins & O'Shannessy, 2010; Meakins, forthcoming, 2009; O'Shannessy & Meakins, 2012; O'Shannessy, 2009), vowel formants in Gurindji Kriol (Jones, Meakins, & Muawiyath, 2012), stop/fricative variation in Gurindji Kriol (Buchan, forthcoming), VOT in Gurindji Kriol (Jones & Meakins, 2013) and Roper Kriol (Baker, Bundgaard-Nielsen, & Graetzer, 2014), and the production of pre-stopped nasals in Kaytetye (Cottet et al., 2014).

(7.1.2)	nantji <b>purtek</b>	→ [nanɟi <b>βu</b> tek]
	THING dirt	
	<i>dirt</i>	(MK, PSE)

Examples 7.1.3-4 show some environments that disfavour lenition. In 7.1.3 lenition of the first /k/ is disfavoured because it has no preceding segment, and the second because it is the onset of an unstressed syllable. In 7.1.4 lenition of the first /p/ is disfavoured because it is utterance initial, and the second because it is preceded by a stop.

(7.1.3)	<b>kardu wakal</b>	→ [k <sup>h</sup> aɟu wakal]
	pers small	
	<i>child</i>	(JL, PSE)

(7.1.4)	<b>putput</b>	→ [pʊtput]
	<i>pregnant</i>	(AnB, PSE)

/p/ and /k/ lenition is found in all types of speech, but is more frequent in Murriny Kardu Kigay (MKK) than in standard Murrinh Patha (SMP, §4.7). This is one of the more salient ways in which kigay “speak differently”. Whereas the phonological integration of English borrowings discussed in the last chapter could not be compared between MKK and SMP for want of appropriate archival data (§6.1), the realisation of indigenous phonemes can be investigated using archival recordings. The main datasets used to demonstrate this are careful speech recordings, which offer the most substantial and quantifiable point of comparison between MKK and SMP. However smaller samples of spontaneous narrative in MKK and SMP further support the thesis of a distinction between the groups. What is not clear from the current data is to what extent this distinction should be attributed to phonological change-in-progress, or to age-graded stylistic differences.

Within the MKK cohort there is significant variation in lenition frequency, and the most lenition is found among kigay at the youngest end of the age range, and

with Marri language heritage. Marri languages have a variably pronounced p/ɸ obstruent in word-initial positions, and the small amount of evidence available indicates that this variation is transferred by Marri language speakers when they learn MP as L2. This suggests that the correlation of /p/ lenition with Marri language heritage among kardu kigay may have its origins in language contact, with phonological interference effects inherited by contemporary kigay who themselves speak MP as L1.

## 7.2 The phonology of /p/ and /k/ lenition

The canonical realisations of /p/ and /k/ are as voiceless stops, but in syllable onsets substantial numbers of voiced, fricative, approximant and zero realisations also occur. The latter three realisations (collectively, “continuants”) are the main focus of this chapter, using the shorthand label “lenition”. The various continuant realisations are favoured by the same speakers, and by the same linguistic environments, so that quantitative analysis of variation is rendered more powerful by treating them together as the target variable.

The linguistic factors that favour lenition of /k/ and /p/ are:

- (1) Preceding vowel or liquid;
- (2) Following back vowel (/a/ or /u/);
- (3) Occurring in the onset of a stressed syllable;
- (4) Occurring in a “function” word, as opposed to a “content” word.

All the factors tested in the analysis were shown to be significant, except that Stress and Structural position “compete” for significance as described in §7.2.5. This section explains the method by which these linguistic factors have been established from a body of MKK careful speech data.

### 7.2.1 Range of realisations and coding conventions

In §5.5.1 we saw that “canonical” careful speech realisations of /p/ and /b/ are both oral stops, but are distinguished in articulatory terms by intra-oral pressure, and acoustically by voicing onset and release burst.<sup>103</sup> These are the most frequent realisations in careful speech (Street & Mollinjin, 1981, p. 195; Walsh, 1976, p. 33); but in syllable onsets<sup>104</sup> other realisations occur, as represented in Table 7.2.1:

		/p/	/b/	/k/	/g/
<i>Stop</i>	<i>Voiceless stop</i>	[p <sup>h</sup> ] ~ <b>[p]</b>	-	[k <sup>h</sup> ] ~ <b>[k]</b>	-
	<i>Voiced stop</i>	[b]	<b>[b]</b>	[g]	<b>[g]</b>
<i>Continuant</i>	<i>Fricative</i>	[ϕ], [f], [β]	[β]	[ɣ]	<b>[ɣ]</b>
	<i>Approximant</i>	[w]	[w]	[ɥ] ~ [w]	[ɥ]
	<i>Zero</i>	∅	∅	∅	∅

**Table 7.2.1 Syllable-onset peripheral obstruent realisations. Most common realisations are bolded.**

In quantitative terms, we will see in §7.3 that the number of continuant realisations for /b/ is fairly low for both MKK (< 10%) and for SMP (0%, though the data is sparse). For /g/ there is a substantial number of continuant tokens, but the frequency of this realisation is fairly stable between SMP (45%) and MKK (58%). It is in the voiceless obstruents, /p/ and /k/, where we find a more substantial quantitative difference between SMP and MKK, leading me to select these as the variables for sociophonetic analysis.

<sup>103</sup> I have done some analysis of VOT and release burst in the p/b and k/g pairs in MKK. This reveals that some speakers produce very similar word-initial realisations for /p/ and /b/, raising the possibility of some instability in this word-initial distinction. However more extensive quantitative investigation of both SMP and MKK would be required to do justice to this topic.

<sup>104</sup> In syllable codas, obstruents are always voiceless, unreleased stops [p̚], [k̚]. Because it is categorically predictable, the “unreleased” diacritic is generally not included in phonetic transcriptions in this thesis – except for where it becomes relevant in the discussion of phonological integration of English material (§6.5).

Picture-stimulated careful speech by *kardu kigay* has been used to investigate the linguistic patterns governing *p/k* realisation (§1.5.2). The data consists of 4401 phonetically transcribed utterances from 24 *kigay* aged 18–41. This includes 3705 instances of syllable-onset peripheral obstruent phonemes, of which I analyse 2783 tokens as being */p/* and */k/* phonemes in their lexical representations, based on Street (2012) and the range of realisations in my own data. Realisations of these peripheral obstruents were transcribed by me impressionistically, but almost 20% of the tokens (about 500) were further checked in Praat (Boersma & Weenink, 2012). Tokens in which formants continue uninterrupted were interpreted as approximants; those where formants are replaced by turbulent noise were interpreted as fricatives; those where there is a break containing neither clear formants nor turbulence were interpreted as stops. Fricative and approximant realisations were treated as positive instances of lenition.

### *7.2.2 Multivariate analysis of linguistic factors*

Multivariate analysis of lenition was computed for */p/* and */k/* separately<sup>105</sup> using Rbrul (Johnson, 2009); which was selected instead of Goldvarb (Sankoff, Tagliamonte, & Smith, 2012) because of its capacity to include “random effects” (Gorman & Johnson, 2013). All factor groups were implemented as fixed polynomials except for the morpheme in which the obstruent occurred, which was treated as a random effect (see §7.2.7 below). Both step-up and step-down procedures in Rbrul resulted in the selection of this model, which uses all factor groups tested.

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<sup>105</sup> I also tested a multivariate analysis combining */p/* and */k/* tokens, with place of articulation as an independent variable. This gave very similar results to the separate */p/* and */k/* analysis, but with */p/* more likely to lenite than */k/*, preceding liquid a more powerful predictor than vowel, and following */a/* a more powerful predictor than */u/*. But this analysis essentially glosses over the subtle differences between */p/* and */k/* for flanking segment factors, so the separate analyses have been preferred.



Table 7.2.2 gives the results of the analysis, in which all factor groups are highly significant (i.e.  $p < 0.01$ ). For each factor two results are given: (a) the percentage of tokens with this factor that are lenited (and the total number of tokens with this factor); (b) the “Centred factor weight” (Cfw) as calculated by Rbrul, which is on a scale from 0–1, being 0.5 if the factor is neutral, closer to 1 the more strongly it predicts lenition, and closer to 0 the more strongly it predicts non-lenition.<sup>106</sup> Bolded factors are those that positively predict lenition, and factor groups are ordered with those that have the greatest effect on /p/-lenition at the top of the table.

	/p/ 21.3% (971) <i>Deviance</i> = 712.5			/k/ 15.7% (1912) <i>Deviance</i> = 1405.9		
	<i>Factor</i>	<i>% lenite (N)</i>	<i>Cfw</i>	<i>Factor</i>	<i>% lenite (N)</i>	<i>Cfw</i>
<i>Preceding segment</i> ( $p < 0.01$ )	<b>Lateral</b>	63.6% (55)	<b>0.897</b>	<b>Vowel</b>	27.9% (748)	<b>0.754</b>
	<b>Vowel</b>	27.1% (535)	<b>0.533</b>	<b>Lateral</b>	12.3% (65)	<b>0.693</b>
	Trill	37.5% (8)	0.469	Nasal	10.8% (332)	0.473
	Stop / none	6.4% (373)	0.102	Trill	3.0% (99)	0.305
	[Nasal]	1.3% (157)		Stop / none	6.7% (668)	0.269
<i>Syllable stress</i> ( $p < 0.01$ )	<b>Stressed</b>	27.2% (635)	<b>0.698</b>	<b>Stressed</b>	19.9% (1178)	<b>0.599</b>
	Unstressed	10.1% (336)	0.302	Unstressed	9.0% (734)	0.401
<i>Lexical class</i> ( $p < 0.01$ )	<b>Function</b>	40.6% (271)	<b>0.683</b>	<b>Function</b>	19.3% (693)	<b>0.579</b>
	Content	13.9% (700)	0.317	Content	13.7% (1219)	0.421
<i>Following vowel</i> ( $p < 0.01$ )	/u/	24.9% (273)	<b>0.635</b>	/a/	22.2% (865)	<b>0.632</b>
	/a/	30.7% (335)	<b>0.594</b>	/e/	17.6% (159)	<b>0.603</b>
	/e/	9.3% (162)	0.477	/u/	10.4% (673)	0.495
	/i/	10.4% (201)	0.301	/i/	5.1% (215)	0.281

**Table 7.2.2 Multivariate analysis of linguistic factors for /k/- and /p/-lenition in MKK**

<sup>106</sup> The Centred factor weight (Cfw) is an expression of how likely lenition is to occur with this predictor, *all else being equal* (i.e. if all other factors had a neutral influence). In the actual data all else is *not* equal, and any given predictor happens to coincide with other factors in non-neutral ways, which is why the ranking of Cfw does not always coincide with the lenition proportions of the predictors (for mathematical details see Johnson, 2009, pp. 361–2).

In the sections that follow I describe in turn each of the linguistic factors included in the analysis, explaining how each was coded, and discussing its effect on continuant realisations.

### 7.2.3 Preceding segment

Preceding segment was tested as a factor since it has elsewhere been attested as a powerful predictor in consonant lenitions. It was analysed independently of position in the word (see §7.2.5), so preceding segments here may occur at the end of the previous word. The influence of preceding segment categories on continuant realisation is repeated in Table 7.2.3:

	/p/ 21.3% (971)			/k/ 15.7% (1912)		
	<i>Factor</i>	<i>% lenite (N)</i>	<i>C<sub>fw</sub></i>	<i>Factor</i>	<i>% lenite (N)</i>	<i>C<sub>fw</sub></i>
<i>Preceding segment</i> ( <i>p</i> < 0.01)	<b>Lateral</b>	63.6% (55)	<b>0.897</b>	<b>Vowel</b>	27.9% (748)	<b>0.754</b>
	<b>Vowel</b>	27.1% (535)	<b>0.533</b>	<b>Lateral</b>	12.3% (65)	<b>0.693</b>
	Trill	37.5% (8)	0.469	Nasal	10.8% (332)	0.473
	Stop / none	6.4% (373)	0.102	Trill	3.0% (99)	0.305
	[Nasal]	1.3% (157)		Stop / none	6.7% (668)	0.269

**Table 7.2.3 Preceding segment influence on continuant /k/ and /p/ in MKK**

The data includes a “none” category for absence of preceding segment (i.e. utterance-initial), which has been merged with the “Stop” category, based on the observation that these produce almost identical proportions of continuant realisations. “Nasal” is excluded from /p/ because it almost categorically produces a following stop (Tagliamonte, 2006, p. 217).

The influence of preceding segment type is much as expected from the literature, with preceding vowels showing a positive influence on lenition. Note that the peripheral obstruents under investigation here are all in simple syllable onsets (a small number of cluster onsets in borrowings such as *klep* < “clap” have been excluded), so that a preceding vowel produces an *intervocalic* environment, which has been widely identified as the segmental context most conducive to

consonant lenition (e.g. Kirchner, 2004; Lass, 1984, p. 182). Kirchner further coins the term “quasi-intervocalic” (p. 317) to describe any flanking combination of vowels, glides or liquids, and which he identifies as a more broadly leniting environment. The positive effect of preceding laterals in MKK obstruent lenition supports this, but for a preceding trill/tap /r/ we find a neutral or negative influence, suggesting that for MP lenition preceding liquids do not behave as a natural class. The positive effect of preceding laterals is much stronger for /p/ than for /k/, though much of this difference is accounted for by the lexical item *tjelput* “house”, almost always lenited to [celβut]. When individual lexemes are included in the analysis as random factors (§7.2.7), the strength of the preceding lateral influence becomes much the same for /p/ and /k/.

The influence of preceding segments on sociophonetic stop/continuant variation clearly has common phonetic underpinnings to the morphophonemic alternations discussed in §5.9.5. Consonant onsets in many bound morphemes take the form OBSTRUENT / N\_\_, APPROXIMANT / V\_\_, which for bilabials produces a /Np/ vs /Vw/ alternation. On the level of sociophonetic variation we have found, similarly, that a preceding nasal favours a stop, and a preceding vowel favours a continuant. As mentioned above, for /p/ the preceding nasal effect was almost categorical, so that these tokens had to be excluded from the analysis. Thus morphophonemic alternations such as ex.7.2.1 can be seen as lexicalized instances of a variable lenition effect. These alternations also fit the favouring stress pattern discussed in §7.2.5 below.

(7.2.1a) mam-'**patha**

3S.HANDS(8)-**make**

*he made it*

(7.2.1b) ma-'**watha**-nu

3S.HANDS(8).FUT-**make**-FUT

*he'll make it*

#### 7.2.4 Following vowel

Testing following vowel as a factor was motivated by the universal observation that different vocalic tongue positions or lip rounding influence the articulation of neighbouring consonants (Ladefoged & Johnson, 2011, pp. 69–70).

	/p/ 21.3% (971)			/k/ 15.7% (1912)		
	<i>Factor</i>	<i>% lenite (N)</i>	<i>C<sub>fw</sub></i>	<i>Factor</i>	<i>% lenite (N)</i>	<i>C<sub>fw</sub></i>
Following vowel ( <i>p</i> < 0.01)	/u/	24.9% (273)	<b>0.635</b>	/a/	22.2% (865)	<b>0.632</b>
	/a/	30.7% (335)	<b>0.594</b>	/e/	17.6% (159)	<b>0.603</b>
	/e/	9.3% (162)	0.477	/u/	10.4% (673)	0.495
	/i/	10.4% (201)	0.301	/i/	5.1% (215)	0.281

**Table 7.2.4 Following vowel influence on continuant /p/ and /k/ in MKK**

Kirchner (2004: p. 324) makes a general statement about vowel influence on consonant lenition, arguing that lowness of vowels favours consonant lenition, due to the greater tongue displacement required to make an oral closure. My data suggests that more specific effects need to be identified relating vowel position to consonant place of articulation. The strongest effect for /k/ is indeed the lowest vowel /a/, presumably because this obstruent is articulated with the tongue body, which must travel furthest from here to the low position of the /a/ vowel, and therefore requires the exertion of greater physical effort, so that lenition produces a substantial yield of “effort cost saving” (Kirchner 2004: p. 314). But for /p/ the tongue body is not involved in the obstruent articulation, so /a/ is a less potent predictor. Instead /u/ is most predictive of /p/-lenition, because its lip-rounding gesture leads to effort cost saving if the bilabial obstruent closure is incomplete.

#### 7.2.5 Stress and structural position

On informal observation it is clear that most obstruent lenition occurs in the onsets of words or bound verbal morphemes, which are also the onsets of stressed syllables:

(7.2.2) kampa panam-ka-kampa-nime → [k<sup>h</sup>amba ,βanamyɑ'uɣambaŋɪm]  
 laugh 3PL.BE(4)-PC-laugh-PC.MASC  
*they're laughing* (SM, PSE)

Word-initial consonant lenition appears to be somewhat unusual globally, according to an appendix of lenition patterns listed in Kirchner (1998, pp. 303–314), and the overview of positional influences provided by Segeral and Scheer (2008). Word-initial *stressed-syllable* lenition seems yet more unusual, according to a typological overview (Bye & de Lacy, 2008). However among Australian languages the weakness of word-initial, stress-syllable consonants, especially compared to the onset of the second syllable, has been widely noted (Blevins, 2001; Blevins & Marmion, 1994; Dixon, 2002, pp. 589–604). The MP lenition data reported here adds synchronic detail to this phenomenon, which has so far only been investigated in diachronic perspective.

MP is somewhat unusual among Australian languages in that stress does not predictably fall on the first syllable of the word – but nonetheless there is word-initial stress for all disyllabic and many trisyllabic words (§5.9). For the current analysis this raises a question, should we analyse lenition in terms of word and morpheme structure (henceforth “structural position”), or in terms of stress? This problem can be approached using multivariate analysis, and by direct observation of instances where stress and word/morpheme onset do *not* align. I begin with the latter approach.

Unstressed syllables in the s1 position of words and morphemes can be found in trisyllabic nominals with s2 stress (§5.10.2), and in some incorporated monosyllabic verb roots (§5.10.3). The data contains some examples of each; for the former, *ka'ngatji* “mother’s country”, *pe'nintha* 3du.masc, *perr'kenku* “two”; for the latter, *-parl* “break”, *-purl* “clean”, *-pak* “put”, *-katj* “cross a river”. There is a strikingly low frequency of lenition in both these types of unstressed onsets.

Conversely, stress that is not word/morpheme initial can be found in the stressed s2 of the above-mentioned trisyllables, and in s3 of quadrisyllabic

nominals, though the data only includes a representative sample of the former category.<sup>107</sup> Peripheral obstruents in stressed second syllables include *nga'papa* “sugar glider”, *dun'pungu* “jungle”, *perr'kenku* “two”. Among this set we find a very high frequency of lenition for *ngapapa*, but not for the other two – though they each have preceding segments that disfavour lenition.

In summary, unstressed word onsets rarely lenite, and the onsets of non-initial stressed syllables tentatively *do* appear to lenite. These observations suggest that it is stress, not structural position, that stimulates lenition – in which case MP may belong to the set of languages, including Tuscan, Celtic and Classical Greek, in which word-boundaries are effectively “invisible” in determining consonant lenition, so that the normally strong word-initial position has no influence (Marotta, 2008, p. 242; Segeral & Scheer, 2008, pp. 145–150).

When we test the factors separately in multivariate analyses along with other known factors, we get very similar calculations of factor weights and statistical significance. When the obstruent’s morpheme exponent is not included as a random effect (see §7.47 below), stress is a slightly more powerful factor than structural position. There is an inconsistency in the behaviour of bound morpheme onsets (mostly embedded verb roots), which favour lenition for /k/, but for /p/ disfavour lenition almost categorically, so that this category must be excluded from the analysis. Inspection of bound /p/ morphemes in the data shows that they are exclusively monosyllabic verb roots such as *-parl* “break”, *-purl* “wash”, which are unstressed syllables – suggesting that the stress factor is overriding word structure here to create the inconsistency. Once the morpheme exponent is included as a random effect, stress remains a more powerful factor for /p/, but structural position becomes more powerful for

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<sup>107</sup> The data does include quadrisyllables *,kalak'kalak* “cloud” and *,kilik'kilik* “galah”, but since these are lexicalized reduplications, it is not clear whether their third syllables should behave more like morpheme-medials or morpheme-onsets.

/k/.<sup>108</sup> If stress and structural position structure are tested together in a multivariate analysis, unsurprisingly one cancels out the significance of the other (since they have so much overlap), and for /k/ it is structure that wins out, while for /p/ stress wins out.

All in all, multivariate analysis does not conclusively show either of the factors to be more powerful than the other. But the inconsistencies in applying word-structure categories to /p/ and /k/ suggest that stress may be a more powerful influence. Considering also the evidence above regarding cases of non-alignment between stress and structure, I therefore use stress rather than structure as a factor, but this must be noted as a matter for review in any further research.

The original transcription data is marked for both primary and secondary stress (§5.9), but exploratory cross-tabulation showed no difference in how these two levels patterned with respect to lenition, so they are merged here.

	/p/ 21.3% (971)			/k/ 15.7% (1912)		
	<i>Factor</i>	<i>% lenite (N)</i>	<i>Cfw</i>	<i>Factor</i>	<i>% lenite (N)</i>	<i>Cfw</i>
<i>Structural position</i> for /p/ ( $p < 0.10$ ) for /k/ ( $p < 0.01$ )	<b>Word onset</b>	0.260 (653)	<b>0.618</b>	<b>Word onset</b>	0.171 (1037)	<b>0.611</b>
	Intramorphemic	0.107 (299)	0.382	<b>Morpheme onset</b>	0.275 (472)	<b>0.512</b>
				Intramorphemic	0.115 (756)	0.378

**Table 7.2.5 Morpho-phonological structure influence on continuant /k/ and /p/ in MKK**

	/p/ 21.3% (971)			/k/ 15.7% (1912)		
	<i>Factor</i>	<i>% lenite (N)</i>	<i>Cfw</i>	<i>Factor</i>	<i>% lenite (N)</i>	<i>Cfw</i>
<i>Syllable stress</i> ( $p < 0.01$ )	<b>Stressed</b>	27.2% (635)	<b>0.698</b>	<b>Stressed</b>	19.9% (1178)	<b>0.599</b>
	Unstressed	10.1% (336)	0.302	Unstressed	9.0% (734)	0.401

**Table 7.2.6 Syllable stress influence on continuant /p/ and /k/ in MKK**

<sup>108</sup> This appears to be because the morpheme random effect attributes the lenition of non-initial but stressed syllables such as *-ri'kerdek* “finish” to lexical specificity (see §7.4.7), which is perhaps erroneous, given that we suspect stress to be a predictive factor.

An alternative method for prosodic coding in the data would be to categorise onsets according to whether they occur in the “post-tonic” position or not (Brett Baker, *p.c.*). This approach is motivated by the widespread observation of consonant fortition in Australian languages directly following a stressed syllable (Butcher & Fletcher, 2014).

Most work on post-tonic fortition has focused on disyllabic 'CVC(C)V(C) words, and for these the alternative stress coding would not change anything, since we would still be dealing with two onset categories, one being the onset to the stressed syllable, and other the unstressed syllable. Where the alternative coding *would* have an effect would be in the third syllable onset of 'σσσ words, and the first syllable onset of σ'σσ words. In my stressed/unstressed coding, these unstressed syllables are coded in the same category as the post-tonic onsets; but in a post-tonic vs “other” coding, they would be in the same category as the stressed syllables.

While I have not attempted to recode and reanalyse with the alternative prosodic categories, I suspect that they would be less effective. A review of trisyllabic words and verb roots suggests that the third-syllable onset in 'σσσ ('*darripi* “skin”, '*nginipuny* “body”, -'*mardapak* “insert”) is usually *not* lenited – i.e. it behaves more like the post-tonic onset than the stressed syllable onset. This supports a categorization of stressed vs unstressed onsets, as opposed to post-tonic vs other. It also begs the question of whether, at least for MP, the relationship between consonants and prosody is a matter of post-tonic *fortition*, or rather stress-onset *lenition*. If extended to other languages, we should ask whether the widely noted post-tonic fortition in Australian languages is really a fortition *relative to* the stressed-syllable onset, which is perhaps the more marked. What are the relative onset weights in trisyllabic feet?



### 7.2.6 Lexical class

“Functional” or “grammatical” word classes have been shown to favour lenition in Indo-European languages (Round, 2011), motivating the inclusion of a lexical class factor in the MKK lenition analysis. I begin with a relatively fine-grained categorization of lexical classes, as illustrated in Table 7.2.7, though these are merged into “function” and “content” classes for the multivariate analysis.

	/p/		/k/	
	<i>Proportion continuant tokens (N tokens)</i>			
<i>Lexical class</i>	Serial verb	0.48 (46)	Serial verb	0.58 (64)
	Demonstrative	0.50 (16)	Particle / Affix	0.35 (34)
	Verb classifier	0.34 (226)	Demonstrative	0.26 (39)
	GRAND MEAN	0.179 (1126)	Verb root	0.24 (251)
	Nominal (Eng)	0.17 (35)	Nominal (Eng)	0.18 (136)
	Nominal	0.14 (592)	GRAND MEAN	0.153 (1920)
	Pronoun	0.04 (48)	Verb classifier	0.14 (230)
	Verb root	0.01 (162)	Noun classifier	0.13 (319)
	Particle / Affix	0.00 (1)	Nominal	0.10 (789)
			Pronoun	0.00 (54)
			Verb root (Eng)	0.00 (4)

**Table 7.2.7 Lexical class correlations to lenition of /k/ and /p/ in MKK**

The finely categorised lexical classes here are too sparsely populated to be used in multivariate regression. Accordingly, the mean proportions shown in the Table are used to motivate the establishment of two broad categories, function-morpheme and content-morpheme. The “function” category is a merger of serial verbs, particles and affixes, demonstratives, noun classifiers and verb classifiers – i.e. all closed classes that add grammatical information, and are not typically focal in the intonation phrase. The “content” category is a merger of nominal and verb roots, including English/Kriol borrowings to these classes, as well as pronouns – i.e. all the predicational and substantive heads, which are often focal in the intonation phrase. Note that the function/content split almost aligns with a closed-class/open-class split; the only exception is pronouns, which are of course a closed class, but behave more like content words in terms of lenition.

	/p/ 21.3% (971)			/k/ 15.7% (1912)		
	<i>Factor</i>	<i>% lenite (N)</i>	<i>C<sub>fw</sub></i>	<i>Factor</i>	<i>% lenite (N)</i>	<i>C<sub>fw</sub></i>
<i>Lexical class</i>	<b>Function</b>	40.6% (271)	<b>0.683</b>	<b>Function</b>	19.3% (693)	<b>0.579</b>
( <i>p</i> < 0.01)	Content	13.9% (700)	0.317	Content	13.7% (1219)	0.421

**Table 7.2.8 Lexical class influence on continuant /p/ and /k/ in MKK**

As expected, the “function” classes together show higher rates of lenition than the “content” classes.

### 7.2.7 Individual morphemes

The 2783 /k/ and /p/ tokens in the data feature in 256 distinct morphemes, and this includes some morphemes that have quite large numbers of exemplar tokens. Particular nouns and verb roots were sought in the elicitation as examples of peripheral obstruent realisation, and if speakers produced these in more than one distinct form, up to three distinct forms were included in the data. Therefore items such as *-purl* “wash”, *ngapapa* “sugar glider”, *kilikilik* “galah” and *-kampa* “laugh” all have over 20, and in some cases over 50 tokens in the data. Function words such as *kura* NC:WATER and *panam* 3PL.BE(4).NFUT also have large numbers of tokens. Because some factorial configurations are not very common in the data (e.g. /k/ x word-initial x following /e/), particular morphemes can account for fairly substantial proportions of these configurations. For example, /k/ in a word-initial position with following /e/ has 106 tokens, of which 59 are various realisations of the elicited word *kerrkerrk* “sharp”.

It has been shown that individual lexical items can have individual phonetic effects (Bybee, 2001; Pierrehumbert, 2002; Walker, 2012), so it must be allowed that this may be the case here – though the complex of phonological and syntactic factors that apply to each individual morpheme make it virtually impossible to detect such effects through casual inspection. Rather, the inclusion of the morpheme to which each obstruent token belongs as a “random effect” in

the regression model uses statistical methods to distinguish any morpheme-specific influence that might be separated out from more general linguistic factors (Gorman & Johnson, 2013). In other words, each morpheme is tested for whether it could in itself be ascribed some influence on lenition outcomes, independent of the phonological and structural contexts of its peripheral obstruents.

When individual morphemes are included in the multivariate analysis as random effects, the ordering of factors in the model remains the same for all factor groups except for the preceding segment group for /k/, where lateral and vowel switch positions, bringing them into line with /p/. For /k/ there is also a decrease in statistical robustness for the following vowel and stress factor groups, which are now only around 85% likely to have a real influence ( $p = 0.17$  and  $0.12$  respectively), and therefore below the standard threshold of statistical significance, as represented by grey shading in the Table below. This shows that the strength of these factors was highly dependent on a small number of morpheme exponents, to which the model now attributes influence. This does not show that these factors are *not* influential, but only that the evidence depends too heavily on certain morphemes, and so we must allow a greater probability of noise in the data. Table 7.2.9 reports a revised multivariate analysis with individual morphemes included as a random effect. (The weights of the most influential morphemes are shown in Table 7.2.10 below.)

	/p/ 21.3% (971)			/k/ 15.7% (1912)		
	Factor	% lenite (N)	C <sub>fw</sub>	Factor	% lenite (N)	C <sub>fw</sub>
Preceding segment ( <i>p</i> < 0.01)	<b>Lateral</b>	63.6% (55)	<b>0.780</b>	<b>Vowel</b>	27.9% (748)	<b>0.798</b>
	<b>Vowel</b>	27.1% (535)	<b>0.644</b>	<b>Lateral</b>	12.3% (65)	<b>0.743</b>
	<b>Trill</b>	37.5% (8)	<b>0.549</b>	Nasal	10.8% (332)	0.442
	Stop / none	6.4% (373)	0.114	Trill	3.0% (99)	0.258
				Stop / none	6.7% (668)	0.242
Following vowel (for /p/ <i>p</i> < 0.05) [for /k/ <i>p</i> = 0.17]	<b>/u/</b>	24.9% (273)	<b>0.635</b>	<b>/a/</b>	22.2% (865)	<b>0.629</b>
	<b>/a/</b>	30.7% (335)	<b>0.594</b>	<b>/e/</b>	17.6% (159)	<b>0.574</b>
	<b>/e/</b>	9.3% (162)	0.569	<b>/u/</b>	10.4% (673)	<b>0.539</b>
	<b>/i/</b>	10.4% (201)	0.301	<b>/i/</b>	5.1% (215)	0.273
Syllable stress (for /p/ <i>p</i> < 0.01) [for /k/ <i>p</i> = 0.12]	<b>Stressed</b>	27.2% (635)	<b>0.712</b>	<b>Stressed</b>	19.9% (1178)	<b>0.546</b>
	Unstressed	10.1% (336)	0.288	Unstressed	9.0% (734)	0.454
Lexical class ( <i>p</i> < 0.01)	<b>Function</b>	40.6% (271)	<b>0.757</b>	<b>Function</b>	19.3% (693)	<b>0.649</b>
	Content	13.9% (700)	0.243	Content	13.7% (1219)	0.351

**Table 7.2.9 Multivariate analysis of linguistic factors for /p/- and /k/-lenition in MKK, including morphemic exponents as random effects**

Table 7.2.10 shows the factor weights calculated for the 10 morphemes with the strongest effects favouring and disfavouring lenition respectively (ignoring those with less than five tokens). To be clear, these rankings do not indicate the morphemes that have the highest/lowest proportion of lenited tokens, but rather the morphemes for which their lenition rates depart most from the lenition rate that would be expected when taking into account phonological and structural context. For example, the verb root *-ri'kerdek* “finish” is allocated the highest positive factor weight for /k/-lenition, but its proportion of lenited tokens – 0.815 – is somewhat lower than the indefinite/interrogative marker *kama*, which lenites in all of its tokens (N=5). This is because *-ri'kerdek* is a verb root (a content morpheme) and has the more neutral following vowel /e/; whereas *kama* is a function morpheme, with word-initial /k/, and has the most

positive following vowel /a/ – therefore the latter should be expected to be more frequently lenited than the former.

/p/			/k/		
	% lenite (N)	Cfw		% lenite (N)	Cfw
<i>tjelput</i> “house”	66% (29)	0.923	<i>-rikerdek</i> “finish”	82% (27)	0.947
<i>pangkuy</i> “snake”	73% (11)	0.884	<i>kart</i> “cards”	67% (27)	0.883
<i>perrkenku</i> “two”	27% (11)	0.834	<i>kama</i> “maybe”	100% (5)	0.880
<i>patha</i> “good”	59% (29)	0.823	<i>kale</i> “mother”	39% (44)	0.875
<i>piliny</i> “star”	14% (29)	0.798	<i>-kurluk</i> “cough”	60% (5)	0.872
<i>pumamka</i> 3PC.DO(8).NFUT	63% (27)	0.743	<i>-kampa</i> “laugh”	46% (57)	0.870
<i>palngun</i> “woman”	35% (20)	0.715	<i>=kathu</i> “from”	86% (7)	0.867
<i>putput</i> “pregnant”	14% (22)	0.695	<i>kigay</i> “young man”	40% (5)	0.844
<i>pana</i> ANAPH	86% (7)	0.673	<i>kunugunu</i> “old lady”	24% (33)	0.769
<i>pungu</i> 3PL.PULL(32).IRR	60% (5)	0.656	<i>kilern</i> “green plum”	15% (26)	0.760
<i>pelpitj</i> “head”	0% (6)	0.372	<i>malkimarrin</i> “vein”	0% (26)	0.268
<i>panamka</i> 3PC.BE(4).NFUT	39% (36)	0.347	<i>pumamka</i> 3PC.DO(8)	7% (29)	0.247
<i>pemarr</i> “hair”	4% (26)	0.337	<i>keintot</i> “cane toad”	0% (22)	0.240
<i>pepe</i> “down”	2% (58)	0.335	<i>pibimka</i> 3PC.STAND(3)	0% (9)	0.225
<i>thapak</i> “fog”	0% (25)	0.317	<i>nakurl</i> “later”	2% (47)	0.224
<i>-purl</i> “wash”	0% (20)	0.300	<i>wakal</i> “child”	0% (14)	0.217
<i>punu</i> 3.FEET(7).IRR	33% (6)	0.298	<i>=nukun</i> ADVERS	0% (8)	0.195
<i>pulupulu</i> “kite sp.”	8% (26)	0.271	<i>ke</i> “nerite shell”	0% (18)	0.189
<i>pangkin</i> “back”	0% (26)	0.255	<i>magulkul</i> “heart”	0% (25)	0.166
<i>pan</i> 3S.23.NFUT	0% (6)	0.208	<i>nukunu</i> “he”	0% (53)	0.129

Table 7.2.10 Individual morpheme effects on /p/ and /k/ lenition

It is not clear *why* certain morphemes should lenite more or less than what would be predicted by their phonological and lexical factors. This may simply indicate that there are further such factors yet to be identified – but this does not seem likely when we consider formally similar pairs such as *kart* “(playing) cards” (18 lenitions in 27 instances; random effect favouring lenition 0.883) and *kap* “cup” (0 lenitions in 9 instances; random effect disfavouring lenition 0.311). A more plausible explanation would be word frequency effects, given that more frequent words have been shown to attract more lenition (Bybee, 2001;

Pierrehumbert, 2002), though this may be restricted to variables that represent a change in progress (Walker, 2012). Unfortunately the current MKK corpus is not large enough to furnish reliable lexical frequency data.

### **7.3 Increased lenition in MKK compared to SMP**

The lenition of /p/ and /k/ is far more frequent in MKK compared to SMP. I establish this fact primarily with reference to careful speech data – which is the only source substantial enough for robust quantificational analysis. However I also compare smaller samples of narrative speech data, in which MKK speakers again lenite much more frequently than SMP speakers.

SMP speakers lenite /p/ and /k/ in around 7% of syllable onsets in careful speech, rising to about 20% in narrative speech (where only /p/ is tested). MKK speakers lenite more than twice as much in both speech types: 17% in careful speech, and 42% in narrative speech.

In Labov's view, careful speech is seen as less "natural" and less systematic than unmonitored speech, which is therefore the proper object of sociophonetic study (Labov, 1972, p. 208; cited in Tagliamonte, 2006, p. 8). Later sociolinguists with a focus on style shifting and "performativity" critique the idea of any speech type being "natural" (Coupland, 2007, pp. 181–4). But no matter what view one may take of speech types and phonological ontology, it is of interest to know whether differences between groups in careful speech are highly specific to that speech type, or whether they are representative of more general differences. In this study I did consider it plausible that careful speech differences might reflect a difference in attitudes to the elicitation situation. Given that older men have more perceived legitimacy in speaking MP than do young men, it is plausible that in the context of self-monitored speech, "representing" the MP language, the former group would make more effort to enunciate carefully than the latter group. For this reason small samples of spontaneous narrative speech were checked.

Spontaneous speech could not be used as the primary data in this study due to sparsity of material. For MKK there were some difficulties in making high-quality recordings of spontaneous speech due to kigay’s natural reticence with respect to being recorded (§1.5), though with time the range of speakers for whom I have good recordings is gradually increasing. But for SMP there are few good recordings, and the two samples used here represent the only archival items so far identified that contain long enough passages of spontaneous speech with high enough audio quality to judge tokens as being continuant or stopped with any degree of confidence.

### 7.3.1 Lenition rates in careful speech

For SMP, the source data is word list and English-based elicitation sessions recorded by Walsh (1986), Butcher (1990) and Blythe (2004), representing 5 male speakers from MP clans, all born around the beginning of the Mission (§1.5.5). The resulting dataset has 422 tokens of syllable onset peripheral obstruents closely transcribed, and coded for various environmental factors discussed below. Of these some 20% were reviewed in Praat (Boersma & Weenink, 2012) to check the accuracy of segmental transcription. The voiced obstruents /b/ and especially /g/ are quite rare compared to their voiceless counterparts, and so are rather sparsely attested in the SMP dataset, having only 42 and 22 tokens transcribed respectively.

Table 7.3.1 illustrates the attested realisations of syllable-onset peripheral obstruents in SMP, and the percentage and token count each accounts for in the SMP careful speech data:

		/p/		/b/		/k/		/g/	
<i>Stop</i>	<i>Voiceless stop</i>	<b>[p<sup>h</sup>] ~ [p]</b>	<b>84%</b> (144)	-		<b>[k<sup>h</sup>] ~ [k]</b>	<b>75%</b> (140)	-	
	<i>Voiced stop</i>	[b]	9% (15)	<b>[b]</b>	<b>100%</b> (42)	[g]	19% (35)	<b>[g]</b>	<b>55%</b> (12)
<i>Continuant</i>	<i>Fricative</i>	[ϕ], [f], [β]	5% (8)	-		[y]	1% (2)	<b>[y]</b>	<b>40%</b> (9)
	<i>Approximant</i>	[w]	3% (5)	-		[u] ~ [w]	3% (5)	[u]	5% (1)

		<b>/p/</b>		<b>/b/</b>		<b>/k/</b>		<b>/g/</b>	
	<i>Zero</i>	?∅		-		∅	2% (4)	-	

**Table 7.3.1 Syllable-onset peripheral obstruent realisations in SMP. The most common realisations are bolded.**

These figures confirm that voiceless stops are the most common, “canonical” realisation for /p/ and /k/ in SMP careful speech, with the next most common realisations being voiced stops, most of which are accounted for by preceding nasals. Continuants are rare, accounting for only 7-8% of tokens. Note that /g/ has a defective distribution in SMP, occurring only word-medially (see §5.5).

Table 7.3.2 illustrates the range of syllable-onset peripheral obstruent realisations in MKK and the percentage of tokens each accounts for in careful speech data:

		<b>/p/</b>		<b>/b/</b>		<b>/k/</b>		<b>/g/</b>	
<i>Stop</i>	<i>Voiceless stop</i>	<b>[p<sup>h</sup>] ~ [p]</b>	<b>66%</b> (754)	[p] <sup>109</sup>	20% (70)	<b>[k<sup>h</sup>] ~ [k]</b>	<b>65%</b> (1250)	[k]	8% (25)
	<i>Voiced stop</i>	[b]	15% (169)	<b>[b]</b>	<b>71%</b> (242)	[g]	20% (380)	<b>[g]</b>	<b>31%</b> (92)
<i>Continuant</i>	<i>Fricative</i>	[ϕ], [f], [β]	11% (120)	[β]	7% (25)	[ɣ]	8% (164)	<b>[ɣ]</b>	<b>34%</b> (101)
	<i>Approximant</i>	[w]	5% (56)	[w]	1% (2)	[u] ~ [w]	4% (68)	[u]	22% (65)
	<i>Zero</i>	∅	3% (34)	∅	1% (3)	∅	4% (69)	-	5% (16)

**Table 7.3.2 Syllable-onset peripheral obstruent realisations in MKK. The most common realisations are bolded.**

<sup>109</sup> MKK data includes some voiceless stop realisations ([p] and [k]) for the voiced obstruents /b/ and /g/. For /g/ these are entirely accounted for by English/Kriol borrowings such as *goal*, which are quite variable in their voicing realisation, and arguably have an unstable status between k/g phonemes (§6.4.2). Here they have been categorized as /g/ in all tokens for consistency of coding. But for /b/ only half of the /b/ → [p] tokens are English borrowings, while the others are indigenous MP /b/ words in which there is no voicing before the stop release, but rather a coincident voiceless plosive.



These figures show that the dominance of voiceless stop realisations has diminished somewhat for /k/ and /p/, with most of the redistribution falling to continuant realisations, which collectively account for around 15–18% of tokens, compared to 6–8% in SMP. Multivariate analysis of careful speech data from MKK and SMP speakers shows that age group is indeed a significant factor ( $p < 0.01$ ) in peripheral obstruent lenition. Full details of this analysis are provided below (§7.4.1), where older and younger age groups within the kigay age range are also tested.

### 7.3.2 Lenition rates in narrative speech

As already mentioned, the more frequent lenition in MKK compared to SMP is repeated in narrative speech samples.

At least 100 tokens of syllable-onset /p/ were coded in the narrative speech of two MKK speakers and two SMP speakers. The two MKK speakers were selected because good narrative recordings were available for both, and both had a mid-range level of lenition among the MKK careful speech cohort. For SMP the two recordings used were the only suitable narrative recordings available (Street 1981; WAVA 1997). The two MKK speakers lenite /p/ at almost exactly the same frequency – in both cases about 42% of tokens – while the SMP speakers lenite 16% and 22% of tokens respectively. An ANOVA test of SMP vs MKK groups produces strong statistical significance ( $p < 0.01$ ).

		Preceding segment type /p/ → [+ CONTINUANT] proportion (N)
<i>Group</i>	<i>Speaker</i>	<i>Total</i>
<b>SMP</b>	HLK (b. 1910?)	<b>16%</b> (100)
	GM (b. 1938)	<b>22%</b> (106)
<b>MKK</b>	PP (b. 1994)	<b>42%</b> (104)
	JL (b. 1994)	<b>43%</b> (115)
Total		31% (425)

**Table 7.3.4 Narrative /p/ lenition in SMP and MKK**

In these small samples the distribution of influential linguistic variables (e.g. preceding segment type, stress) is slightly uneven among the different samples; however cross-tabulation by preceding segment and stress showed that the MKK speakers have higher lenition frequencies in almost all environments.<sup>110</sup>

As mentioned above, the sample sizes here are very small, and insufficient for detailed analysis of spontaneous speech realisations. However, at the time of writing my MKK corpus is steadily growing, and it is hoped that this will permit further analysis of spontaneous speech variation among kigay. On the one hand this might deepen our understanding of phonetic correlations to speaker age and linguistic heritage. On the other this might facilitate analysis of style shifts as speakers proceed from, say, speaking about their clan and totem background to speaking about their metal mob.

### *7.3.3 Change-in-progress or age-graded style?*

The SMP and MKK speaker samples are distinct in two dimensions: speaker age, and date-of-birth. The SMP speakers are both older at the time of recording (SMP 44–65; MKK 18–41), and are born earlier than the MKK speakers (SMP born 1938–56; MKK born 1971–94). This opens up two possible explanations for the difference between the samples: that it represents a phonological change-in-progress, and that it represents diachronically stable, age-graded variation. To decide between these explanations (or to weight them, if both are contributing factors), will require either comparable data from speakers of the same age at different points in history, or data from the same speakers as they age. Neither of these data types is (yet) available for MP.

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<sup>110</sup> The only exceptions are with preceding liquids, where the SMP speakers have a similar lenition proportion to one of the MKK speakers (though the data is scarce here); and for Stress effects, where only one of the SMP speakers shows the expected positive influence of stressed syllables on lenition. Apart from these anomalies, the effects of preceding segment and syllable stress are much the same as for careful speech.

#### 7.4. Social factors determining speaker differences

We have established that kigay lenite /k/ and /p/ more than older speakers in both careful and spontaneous speech (§7.3). We have also identified the major linguistic factors influencing the lenition, which are primarily phonological (§7.2). The lenition pattern is exhibited in the speech of all kigay in our sample, but there is a wide range of lenition levels among individual kigay, with younger kigay of Marri and Murriny Kura language heritage leniting most frequently.

Table 7.4.1 gives a broad illustration of how lenition levels are distributed among kigay when they are divided into those with MP patrilanguage versus those with Marri or Murriny Kura patrilanguage, and into younger and older age groups:

	<i>Younger (18–27)</i>	<i>Older (28–42)</i>
Murrinh Patha	Low	Low
Marri languages, Murriny Kura	High	Medium

**Table 7.4.1 Lenition levels in kigay according to age group and patrilanguage**

I use the linguistic factor analysis established in §7.2 as the basis for analysing social factors influencing variation among speakers. Linguistic factors are retained in the analysis of social factors to control for random differences in the linguistic content of the careful speech produced by 24 kigay; although each participant's speech is stimulated by the same picture set, the actual utterances produced by each participant vary somewhat.

The standard factors used in the analysis of sociolinguistic variables include age, gender, socio-economic class and ethnicity; but only the first of these is relevant in the current study. Clearly gender is not a variable here, since this is a study of young men's language in particular. Neither is socio-economic class a variable, since the Aboriginal population of Wadeye does not have strong internal socio-economic differentiation, with all family groups essentially equal in relying primarily on welfare income, and entering formal work or education only sporadically (§3.7). The absence of a socio-economic class system has been

reported by other researchers analysing variables in non-urban or “indigenous” speech communities (Stanford & Preston, 2009).

Instead, it is clan, language and ceremonial groups that form the major traditional social categories in Wadeye; and for kardu kigay, it is the heavy metal mobs that are the most salient social groups in terms of day-to-day interaction (§2.7, §3.9). In other small indigenous languages, clan lineage has been shown to be a determining factor influencing sociophonetic variables (Clarke, 2009; Stanford, 2009a, 2009b). The 25 clan groups of Wadeye are too numerous to be used as a variable (§2.6.1), so instead the language groups that are effectively super-sets for clans will be analysed. This factor might be considered to be a form of “ethnicity”, though I would not want to draw the connection too tightly, since Australian Aboriginal hereditary categories do not have the nationalist background of European ethno-linguistic heritage (cf. Fishman, 1977). Likewise, the metal mobs (about 30) are too numerous, but again can be analysed using the supersets formed in the Evil Warrior and Judas Priest groupings.

In the sections that follow I analyse in turn the effect of speaker age, language heritage, and Evil/Priest affiliation, developing a multivariate analysis as I go. We will see that degrees of statistical significance for this analysis are in many cases somewhat below the accepted standard of 95% probability (i.e.  $p < 0.05$ , see Tagliamonte, 2006; Walker, 2010b). This may indicate that the factors are poorly chosen,<sup>111</sup> but I think it more likely that it is because a larger number of speakers would be required to more reliably confirm the presence of genuine social correlations. For this study it was not possible to elicit controlled data from more than 24 speakers, and many of the cells in the matrix of linguistic parentage are empty or under-populated (see below). It is hoped that more extensive data might be gathered for future research.

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<sup>111</sup> There are two other social factors I considered to be of interest, but could not effectively study: (1) time spent at school – I attempted to ask kigay about this, but found that respondents were unwilling or unable to provide quantified answers; (2) area of residence within Wadeye – but this seemed too fluid to be reliably studied (see §2.3).

For now factors that are not statistically significant, but nonetheless have over an 80% probability of influence, are also reported, but are marked by shaded cells in the statistical tables. I refer to these as “suggestive” factors, and include them in discussion because even without robust statistical significance, it can be enlightening to compare the putative influence of factors on /p/ and /k/ respectively.

#### *7.4.1 Age*

As already mentioned in §7.3 there is a statistically significant difference between the kigay cohort as a whole and the older speakers whose recordings represent SMP. In this section I present evidence for this from multivariate analysis, additionally the kigay cohort down into older and younger groups. The two kigay groups used for analysis were “younger” 18–26 (13 speakers) and “older” 27–42 (14 speakers), based on the observation that speakers who lenite more intensely were generally aged 26 or below. Interestingly, it has been previously suggested in ethnographic literature that for Aboriginal males a turning point to “adulthood” may occur at around this age (Brady, 1992, p. 145; Brooks, 2011, p. 189). In sociolinguistic studies of English, the use of youth-indexed sociolinguistic variants has been found to drop off quite suddenly between ages 17–19, which as the end of high school education can be viewed as a time of passage to adulthood (Wagner, 2012).

Age group is a significant factor for both /p/- and /k/-lenition, as shown in Table 7.4.3 below. These facts might be interpreted either to mean that obstruent lenition is an age-indexed stylistic variable, deployed more intensively from teenage to mid-twenties years; or that it is a change-in-progress, with the “apparent time” effect apparent even with a decade or two of age difference. There may also be a combination of the two phenomena, with each generation of kigay pushing the variable a bit further than the last, before reaching adulthood and pulling back from their position at the “leading edge” (Cedergren, 1973;

Labov, 1994, p. 47). The most promising avenues for untangling these phenomena would be the study of stylistic shifts in natural discourse, and the longitudinal study of kigay as they progress into their thirties and forties.

#### *7.4.2 Linguistic heritage*

The town of Wadeye was populated by a variety of language groups, with Murrinh Patha people making up a minority of the original population, and various Marri language dialect groups together making up the majority (§4.3). Analysis of the linguistic heritage of kardu kigay suggests that Marri language heritage correlates to more frequent lenition, though there are considerable complications in the analysis.

In this section I discuss the results of “patrilanguage” and “matrilanguage” (i.e. father’s and mother’s language-group affiliations, which are in turn patrilineal) in the multivariate analysis. In §7.5 I interpret these results with respect to possible language contact effects.

Table 7.5.1 shows the distribution of the 24 kigay speakers into demographic cells according to the younger/older age categories, and four categories of patrilanguage and matrilanguage: Murrinh Patha (MP), Murriny Kura (MK), Marri languages (MX), and Other (XX). Murriny Kura, though no longer spoken as a distinct clan dialect, was clearly closely related to MP; however I code this heritage separately from MP since phonetic realisation of obstruents could well be among its dialectal differences. This would be one possible explanation for speakers describing it as “soft” in comparison to MP (Walsh 1976: 5).

Conversely, the range of Marri dialects spoken at Wadeye (Marri Tjevin, Marri Amu, Marri Ngarr, Magati Ke) are coded as a single category, partly out of necessity, since such numerous categories would render the factors statistically meaningless, but also because all Marri dialects share the feature of fricative obstruents (§7.6.1). The “Other” category includes heritage of Jaminjung,

Mendhe and Ngan'gi languages – all too sparsely represented to treat in any way other than as a residue category.

Each speaker is listed in the Table along with his proportion of lenited p/k tokens respectively (counting all syllable onset tokens). Speakers with the highest levels of lenition are highlighted in **bold face**, and underlining has been used to highlight speakers who have a notable discrepancy between their /k/ and /p/ scores (a phenomenon to be discussed in §7.6). Note that the overall proportions of lenited tokens among all kigay, as reported in §7.3, are /k/ = 0.16 and /p/ = 0.21.

<i>Patrilang</i>	<i>Matrilang</i>	<i>Younger (18–27)</i>	<i>Older (28–42)</i>
		<i>Overall percentage of lenited p/k tokens = 21% / 16%</i>	
MP	MP		JD 14% / 7%
MP	MK		
MP	MX	AnB 25% / 19%	NP 10% / 9%; AIB 17% / 17%
MP	XX	AdB 9% / 6%	
MK	MP		
MK	MK		
MK	MX	<b>KN 35% / 34%</b>	AM 17% / 13%
MK	XX		
MX	MP	AlsL 26% / 15%; AlxL 16% / 13%	FN <u>33%</u> / 8%
MX	MK	MJ 16% / 16%	
MX	MX	JsL 15% / 11%; WD 3% / <u>15%</u> <b>SM 35% / 26%</b> ; <b>MK 35% / 22%</b> <b>KM 26% / 29%</b> ; <b>DM 28% / 31%</b>	OB 6% / 6%; PL 7% / 11% <b>JmL 34% / 20%</b> ; PA <u>18%</u> / 5%
MX	XX		
XX	MP		
XX	MK		
XX	MX	PP 6% / 7%	DP 7% / 10%; SJ 7% / <u>15%</u>
XX	XX		

**Table 7.4.2 Distribution of speakers into cells according to patrilanguage, matrilanguage and younger/older age groups**

The first thing to note about the speaker distribution is that it covers the cells very poorly. This is an intrinsic problem for an analysis where patrilanguage and matrilanguage are independently coded: together with the two age groups, this generates 32 demographic cells, which of course cannot be covered by 24 speakers. The problem is exacerbated by the preponderance of Marri language (MX) heritage in the data, which, given that the selection of speakers was quasi-random (§1.5.2), lends support to the claim that Marri language groups are numerically dominant in the Wadeye population.

The sparseness of speakers across the demographic cells makes the analysis of factor influences less reliable, which is reflected in weak statistical significance as described below. But this elaboration of cells is necessary since, in the absence of any previous research of this type, we cannot know how patrilanguage and matrilanguage respectively might influence sociolinguistic variables. The most sensible hypothesis to begin with is that both might have an effect.

Data difficulties aside, the Table gives us three clear impressions: (1) that there is a wide range of lenition levels among speakers in careful speech, with the lowest around 5–10% and the highest 30–35%; (2) most speakers lenite /k/ and /p/ to approximately the same degree; (3) most of the heaviest lenitors are in the Younger group with both paternal and maternal Marri heritage, and this is also the only cell in which *most* speakers are heavy lenitors, other than the Younger MK/MX cell, in which there is only the single speaker KN.

Multivariate analysis of all social factors for the combined MKK and SMP data is reported in Table 7.4.3. Though not displayed here, all the linguistic variables identified in §7.4 are included in this model. Individual speaker identity is included as a random effect. For each factor level the number of speakers is given in parentheses; while the percentage of tokens lenited by that group is given along with the centred factor weight (Cfw) indicating the estimated influence of that level (see §7.4.1). This model was selected by both step-up and step-down procedures in Rbrul, both of which rejected the Matrilanguage factor group.

	/p/ (deviance = 713.8)			/k/ (deviance = 1342.0)		
	<i>Factor</i> (N speakers)	% lenite	<i>Cfw</i>	<i>Factor</i> (N speakers)	% lenite	<i>Cfw</i>
Age group (N speakers) ( <i>p</i> < 0.01)	<b><i>kigay</i></b> (13)	<b>25%</b>	<b>0.682</b>	<b><i>kigay</i></b>	<b>18%</b>	<b>0.686</b>
	<i>older kigay</i> (14)	15%	0.592	<i>older kigay</i>	11%	0.531
	<i>senior men</i> (4)	4%	0.244	<i>senior men</i>	4%	0.288



Patrilanguage (N speakers) for /p/ (p < 0.01) for /k/ (p = 0.10)	<i>Murriny Kura (2)</i>	28%	0.662	<i>Murriny Kura</i>	22%	0.676
	<b><i>Marri langs (16)</i></b>	<b>22%</b>	<b>0.632</b>	<i>Marri langs</i>	15%	0.481
	<i>Murrinh Patha (10)</i>	14%	0.475	<i>Murrinh Patha</i>	10%	0.428
	<i>Other (3)</i>	8%	0.248	<i>Other</i>	11%	0.408
<b>Random effect: Individual speaker</b>						
<b>Not significant: Matrilanguage</b>						

**Table 7.4.3 Social factors influencing /k/ and /p/ lenition**

We see here a generalized pattern of younger age, Marri language and Murriny Kura language heritage all favouring lenition. Heritage is only statistically significant in the case of patrilanguage influencing /p/-lenition, and matrilanguage has no effect at all. However, note that for the suggestive influence of patrilanguage on /k/-lenition, the ranking of language groups is totally consistent. Murriny Kura (MK) heritage always most favours lenition – though we must cast some doubt on this finding since there are only two speakers with MK patrilanguage and one with MK matrilanguage. Marri language always ranks more favourably for lenition than MP. “Other” ranks as the least leniting category, but since this is a residue group I do not interpret any social meaning in this result.

An interesting question is why patrilanguage should be a more powerful influence than matrilanguage. One possibility would be that it reflects gender differences in the use of stop/fricative variants in Marri languages (James Walker *p.c.*), another that it reflects uncoded factors among the kigay speakers, such as residence, carer and peer interaction during upbringing, and attitudes individuals have to their linguistic heritage.

In summary, I interpret these results as indicating that younger age is a robust factor favouring lenition of both obstruents, while Marri heritage is only a robust effect for /p/-lenition. The high ranking of Murriny Kura suggests that this dialect *may* be genuinely associated with lenition, but this cannot be considered definitive because of the small number of speakers involved. The generally low

level of statistical significance is a limitation of the small number of speakers with respect to the large number of demographic cells to be filled.

### *7.4.3 Metal mob affiliation*

Evil / Priest mob affiliation was tested for significance because of the great importance this bipartite social division has in Wadeye youth culture (§2.7, §3.5). At least in kigay mythology, Evil and Priest are considered to be radically opposed social groups. Given Eckert's (2000) seminal research showing linguistic correlates to a bipartite social division in a Detroit high school (in that case, "jocks" and "burnouts"), it is worth testing if there are similar correlates in Wadeye youth culture.

The data is somewhat suggestive of a correlation between lenition and the Priest grouping, however the level of statistical significance is weak, and language heritage is a more powerful predictor, the inclusions of which neutralizes the mob effect.

Speakers were coded as being affiliated to either Evil, Priest, or in a few cases unknown/ambiguous. The coding of mob affiliation was based on my knowledge of how the individuals fit into the mob network. Direct questioning is not a good method for understanding mob affiliations, since the answers may be highly contextualized in ways not obvious to the questioner. There were two speakers whose social connections I did not understand well enough to assign a coding, and two who I understand to be in a somewhat ambiguous position between the Evil and Priest groupings. While metal mob mythology holds that Evil/Priest are life-long affiliations, in actuality alliances do sometimes change (§2.8.2).

When the mob factor was tested in multivariate analysis together with age group, it showed no effect for /k/-lenition, and a marginally significant effect ( $p = 0.06$ ) for /p/-lenition, with Priest speakers leniting more than Evil, and the ambiguous/unknown group leniting least. However patrillanguage produced a

higher level of significance for /p/-lenition, and once patrillanguage was included in the analysis, mob affiliation was entirely neutralized. This is undoubtedly because of the tendency for Marri language kigay to affiliate as Priest, and MP kigay to affiliate as Evil, so that the patrillanguage and mob affiliation factors are far from independent (§4.3.2). The fact that patrillanguage is selected over mob affiliation in the multifactorial analysis suggests that the former is the social category with a direct correspondence to lenition, while the latter is an indirect consequence of the language group / mob nexus.

### **7.5 Possibility of Marri language contact effect**

Evidence in the last section showed a correlation between Marri language heritage and more frequent /p/-lenition (plus, more weakly, /k/-lenition) in MKK. In this section we will investigate the possibility of this reflecting a language contact effect. There is a plausible hypothesis for such an effect:

- (1) Marri languages have fricative obstruents, which is highly unusual among Australian languages;
- (2) The Marri forebears of contemporary kigay may have transferred fricative obstruent pronunciation into MP when they learnt it as L2 at the Port Keats Mission;
- (3) The Marri-accented pronunciation may have been transmitted intergenerationally to contemporary kigay, who now speak MP as L1.

The multifactorial analysis of obstruent lenition in MKK, together with phonological evidence from an elderly Marri language speaker who learnt MP as L2 during the Mission days, will be drawn on as evidence supporting this hypothesis. However we will also see that the language contact and transmission leaves some difficult questions unanswered.

### 7.5.1 Marri language fricatives

Marri languages are often mentioned in accounts of Australian phonologies as one of the few cases of fricative phones on the continent (e.g. Butcher & Fletcher, 2014, p. 15; Evans, 1995, p. 729). These are often noted as being *phonemic* fricatives, though in fact the evidence of stop/fricative contrasts is rather limited. If frication is phonemically contrastive in these languages, then one would expect that Marri language speakers learning MP as L2 would interpret MP obstruents as contrastive stops (since stops are the canonical realisations in MP), and perhaps fricate them *less* often than multigenerational MP speakers. But if frication is a non-contrastive variable in Marri languages, then one would expect that this phonetic variability might be transferred across to L2 MP.

The only detailed description we have of any Marri language is Marrithiyel (Green, 1989). This is not one of the dialects strongly represented at Wadeye, though it seems to be very similar to Marri Tjevin and Marri Amu (Green, 1989, p. 9), which *are* strongly represented. Green (pp.23–24) analyses Marrithiyel as having a short/long velar contrast that is only active word-medially, and a rather complicated two-way or three-way bilabial contrast between fortis /p/, lenis /b/, and a “fricable” /ɸ/ phoneme (practical orthography <f>) that is only semi-contrastive, since it is variably given the same realisation as the fortis /p/. Green does not comment on the functional load of these contrasts, and provides minimal or sub-minimal alternants only for the word-medial obstruent contrasts:

(MTh)	ngaka	“sister”	
	gaga	“uncle”	
	ngipiya	“I should have done it”	
	ngibiya	“I took it in my mouth”	
	ngifiya	“I blew the flame out”	(Green 1989: 19)

Word-initially, the velar contrast is suspended, while the bilabial contrast is complicated in that /p/ and /b/ contrast in voice onset time, while /f/ is variably realized as either [ϕ], [pϕ] or [p<sup>h</sup>], contrasting only variably with /p/ (pp. 23–25):

/p/ → [p<sup>h</sup>]

/b/ → [p]

/f/ → [ϕ] ~ [pϕ] ~ [p<sup>h</sup>]

However, the supposed /p/-initial words – i.e. those which must begin with [p<sup>h</sup>] and cannot be fricated – seem rather scarce. A 552-item wordlist for Marrithiyel (Green, n.d.) includes just three /p/-initial words.<sup>112</sup> It seems then that word-initially [p] ~ [ϕ] are usually non-contrastive variants, with the latter being the more common realisation.

Documentation is limited for the other Marri dialects, but in general they seem to have stop/fricative contrasts in intervocalic word-medial positions, but not word-initially, where there is instead a non-contrastive tendency to fricate.<sup>113</sup> The difference between structural positions is especially significant because, as described in §7.4.4, it is stressed word-initial or bound morpheme-initial onsets that show a particular tendency to lenite /k/ and /p/ in MKK.

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<sup>112</sup> Of the three /p/-initial words in Marrithiyel I recognise one as a likely borrowing: *putput* “pregnant” is shared with Murrinh Patha.

<sup>113</sup> Of the dialects strongly represented at Wadeye – Marri Ngarr, Magati Ke, Marri Tjevin and Marri Amu – we have much more limited documentation, and no agreement among the various studies. Tryon (1974) lists a single bilabial and single velar obstruent for all dialects, noting that the bilabial is often fricated. Ford (n.d.) lists phonemic contrasts for all dialects, but without discussion or evidence. Kofod’s (1986: 1) documentation of Marri Amu notes the question of stop/fricative contrasts as a topic for further investigation, while in my own recordings of Marri Tjevin I have noted evidence for word-medial, but not word-initial contrasts.

### 7.5.2 Evidence from a Marri language speaker

I have recordings of just one L1 Marri language speaker (at this point there are only a handful still living) speaking Murrinh Patha. Claver Dumoo (b.1945, Marri Tjevin) provided picture-stimulated careful speech data in both his own language and in MP. It would be inappropriate for Claver to “speak for” MP in any way, but he provides MP translations alongside his own language to help clarify his meaning. Claver grew up in the bush among Marri Tjevin people, and later also Magati Ke people, living only sporadically at the Mission as a child. He later settled permanently at the Mission and took up MP as one of his primary day-to-day languages. He is the most active contemporary user of a Marri language that I have encountered in Wadeye (§4.3.1).

Claver’s careful MP speech shows a very high level of fricative and affricate realisations, but only for /p/, and not for /k/ (see figures below):

(7.5.1) pemarr pangkuy → [pʰɛmer 'pʰɛŋɟɟ]  
hair long  
*long hair* (CD, PSE)

(7.5.2) parnu → [βɛŋɟɟ]  
*grass* (CD phon)

Unfortunately Claver is the only speaker of this type from whom data has been obtained, but his pronunciation of MP supports the hypothesis that Marri language speakers learning MP as L2 transfer their word-initial stop/fricative bilabial allophony.

### 7.5.3 Possible intergenerational transmission of variable

We arrive now at the third step of the hypothesis: that intergenerational transmission from speakers such as Claver may be part of the explanation for higher rates of /p/-lenition among Marri-heritage kigay. There is little or no

Marri/MP bilingualism among kigay, who in general do not speak any Aboriginal languages other than MP (§4.3.1). Rather, the hypothesis is that L2 acquisition effects of the type exhibited by Claver have to some degree been transmitted to subsequent generations via carer → child language acquisition. We would then expect those kigay with more Marri language carers to produce the contact-affected variant with greater frequency.

Table 7.5.1 compares the /k/- and /p/-lenition frequencies among SMP, our single Marri language L1 speaker, and MKK speakers divided into those with MP and Marri patrilanguage. The figures here are percentages of lenited tokens in any syllable onset following a vowel or liquid segment.<sup>114</sup>

Age / language category	/p/→ [ɸ,β,w] /{VL}_ (total eligible tokens)	/k/→ [x,y,uɰ] /{VL}_ (total eligible tokens)
SMP (5)	12% (73)	14% (71)
Marri langs L1 (1)	<b>44%</b> (32)	19% (26)
MP patrilanguage MKK (5)	25% (129)	20% (199)
Marri patrilanguage MKK (14)	<b>37%</b> (302)	25% (493)

**Table 7.5.1 Proportion of continuant /k/ and /p/ tokens in SMP, the MP of a Marri language L1 speaker, and MKK (in syllable onsets following liquid, vowel)**

Note that the Marri language L1 speaker has a much higher level of /p/-lenition than SMP speakers, and it is this variable frequency in particular that is closely followed by Marri-patrilanguage MKK speakers. Where established sociolinguistic variables such as English (ing) have been studied with intergenerational detail, it has shown that variable frequencies are transmitted

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<sup>114</sup> The segmental environment was controlled in this way because the SMP phonological data is more dominated by single word forms than the MKK data. Therefore if all syllable onsets were used, this may artificially appear to show fewer lenitions in SMP, since utterance-initial position does not favour lenition.

with remarkable precision between generations (Labov, 2001, pp. 416–418, citing Roberts, 1993).

The relationships among these lenition rates support the hypothesis of intergenerational transmission, as schematized in Figure 7.6.1. The speaker at the top right is a Marri language L1 speaker who learnt MP as L2, and produces far more lenited realisations of /p/ due to interference from his Marri phonological system. The speaker at the top left is an SMP speaker – i.e. a speaker from an MP clan who learnt MP as L1. Speakers at the bottom are MKK speakers: in reality each speaker has a complex configuration of clan/language heritage (more complex the more antecedent generations we take into account), but here the situation is simplified into MP vs Marri patrilineage as identified in our multivariate analysis. The kigay on the left have MP patrilineage: they lenite more than the SMP speakers, but lenite /p/ less than the Marri language L1 speaker. The kigay on the right have Marri patrilineage, and lenite more than their MP-patrilineage peers for both /k/ and /p/.

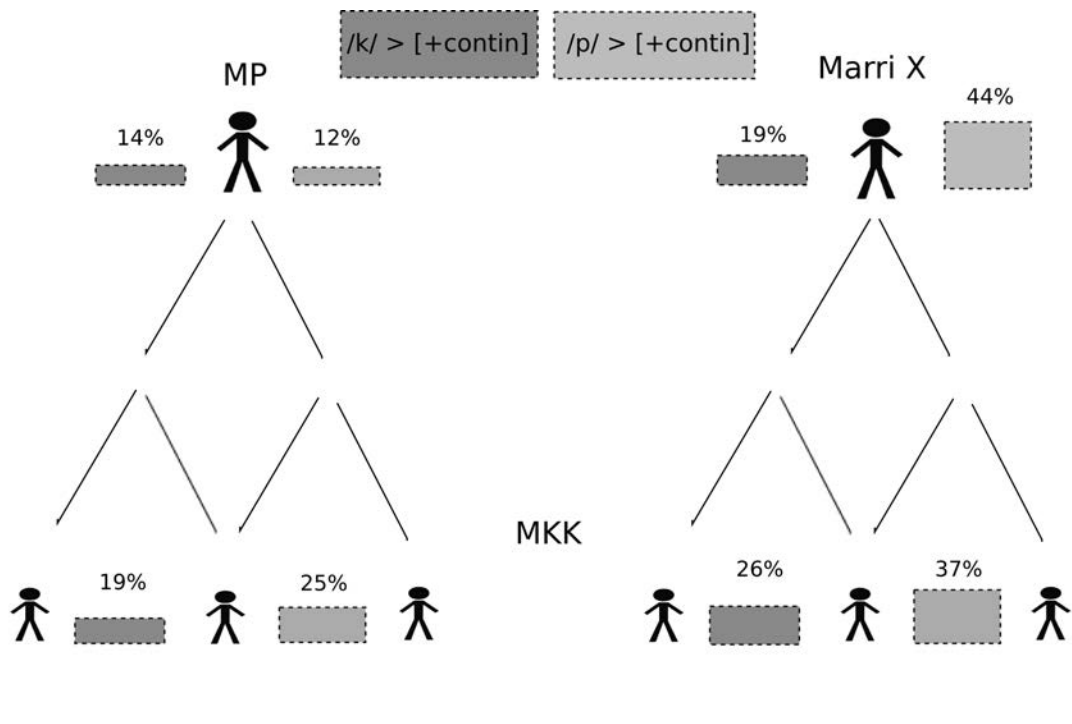


Figure 7.5.1 Generational transmission of lenition variants



Notice that even the kigay with MP patrilanguage (i.e. those at the bottom left) have increased their /p/-lenition substantially in comparison to SMP. This might be explained because these kigay too have some Marri language antecedents in the last two generations. Furthermore, we should expect that once an L2 phonological feature becomes sufficiently widespread in a speech community, it may spread beyond its contact-based roots to infuse the phonology of the whole community (Thomason & Kaufman, 1988). This might explain why MKK speakers as a whole, even those with MP heritage factors in the immediately preceding generation, lenite more than do standard MP speakers.

On the other hand, there are at least three elements of the current data that are not obviously explained by the language contact hypothesis:

- (1) The lenition of /p/ in MKK has a clear explanation in Marri language phonology, but /k/ less so. Velar fricatives have not been attested as phonemes in Marri languages, though it remains an open question to what extent word initial /k/ may lenite.<sup>115</sup> So is /k/-lenition in MKK related at all to Marri language contact, or is it a totally separate effect, with distinct causes? Perhaps it is more purely a youth stylistic effect, reflected in our discovery that age group is a more powerful predictor for /k/, and patrilanguage a more powerful predictor for /p/.
- (2) As mentioned above, it is curious that the multivariate analysis identifies /p/-lenition as strongly influenced by Marri *patrilanguage*, but not at all by Marri *matrilanguage*. Are these calculations merely artefacts of the limited dataset available in this study, or is paternity in fact more powerful than maternity in the transmission of Aboriginal sociolinguistic variables? Or more specifically, does paternity especially effect the transmission of variables to *male* speakers?

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<sup>115</sup> In my Marri Tjevin recordings with Claver Dumoo, he does in fact lenite a substantial proportion of word-initial /k/.

(3) Frication in Marri language obstruents may explain MKK spirantisation, but does it explain further lenition to approximants or zero? The MKK [+CONTINUANT] tokens that are the focus of this analysis are split about 50:50 between fricative realisations, and approximants/deletions. Are these more reduced articulations present in Marri languages? Does spirantisation in MP necessarily imply more drastic lenition?

The appealing elements in the language contact hypothesis should not blind us to alternative hypotheses, or cause us to forget that multiple types of causation may be at work. If contact between distinct phonological systems has had an effect, this does not mean that phonetic principles independently at work in MP have not also played a part (Heine & Kuteva, 2005, p. 258). In fact we have seen that obstruent lenition in particular phonological environments is a feature of Australian phonology in general, and MP phonology in particular, as lexicalized in the p/w morphophonemic alternation (§7.8.1). Therefore if contact with Marri languages has influenced the phonology of MKK, this should not be seen as an effect running counter to indigenous phonological patterns, but rather as an influence to which MP has been receptive because it is compatible with the indigenous phonology.

Meanwhile the role of ethnicity in shaping sociolinguistic variables across a speech community need not derive purely (or even at all) from L2 interference and intergenerational transmission. Variables can become indexical of an ethnic identity in such a way that speakers will propagate them as part of their adolescent linguistic repertoire, without necessarily having acquired them through L1 acquisition (Rampton, 1995). This is especially the case where variants with a language-contact origin take on a status of “covert prestige” (Labov, 2001; Trudgill, 1974).

To proceed further in a detailed sociolinguistic study of MKK phonology would be facilitated, above all, by further data illustrating how MP has been pronounced by L2 learners from the other Aboriginal groups that made up the Mission population. This may be achievable by extensive searching in the

Wadeye town archives, or by recording the few Marri language speakers still alive. Phonological data regarding the disappeared Murriny Kura dialect (§4.4) would also enrich our understanding, though I hold little hope of obtaining such data. Finally, the stylistic dimensions of MKK phonology (i.e. youth-indexed variables, covert prestige) might be revealed by close study of spontaneous discourse, as opposed to the careful speech data that has been the main source of evidence in this chapter.

## 7.6 Summary

In this chapter we have seen that the lenition of peripheral obstruents /k/ and /p/ is a distinguishing characteristic of MKK in comparison to SMP, both in elicited and in spontaneous speech. The lenition occurs most in the onset of stressed syllables, with certain preceding and following segments further favouring lenition in line with principles of “effort cost-saving” in articulatory gestures. The attribution of influence to stress as opposed to structural position is a delicate matter, and one that should be carefully investigated in any further research on these variables.

We have seen that there is much variation among kigay in their frequency of lenition, and that greater lenition is favoured by younger age and Marri language heritage. There is evidence pointing to a language contact effect from Marri languages contributing to MKK peripheral obstruent lenition via L2 phonological interference and intergenerational transmission, though evidence from more speakers across the generations would help solidify this hypothesis.

The findings in this chapter may or may not point to language change-in-progress, but they do very clearly show the existence of phonetic variables with social correlates in the MP speech community. This is a topic very little studied in Australian Aboriginal languages, so that this chapter may be regarded as a tentative exploration into new terrain. Topics such as the use of sociophonetic style-shifting, and the effects of paternal and maternal linguistic heritage, will

require much more research before the sociolinguistic outlines of Aboriginal Australia can be more clearly distinguished. I will argue in Chapter 12 that the peripheral obstruent lenition in MKK is one of the distinctive features of a youth speech variety indexing town life in contrast to bush traditions, and showing that remarkably similar socio-phonetic features have been documented in other Aboriginal town varieties.

The chapters that follow describe change and variation in MP verb morphosyntax, but have much less scope for quantitative sociolinguistic analysis, and will instead focus more on mechanisms of language change.

## The Murrinh Patha verb

### 8.1 Introduction

This chapter provides an overview of the MP verb, establishing the background for discussions of Murriny Kardu Kigay (MKK) change and variation in the two chapters that follow. Most of this chapter is a synthesis of published sources describing MP verb morphology – especially Walsh (1976:202–243), Blythe (2009), Nordlinger (2010a) and Nordlinger and Caudal (2012, henceforth "N&C") – however these are integrated with some of my own observations and analysis drawing on archival data of older speakers, which I label “standard MP” (SMP, §4.7) in contradistinction to MKK.

MP has a polysynthetic verb that brings several paradigms into play, encoding verb semantics, verbal arguments and TAM in an eight-slot template (Blythe 2009:119; Nordlinger 2010a). Such a morphologically complex verb, in which a whole clause can often be encoded, is characteristic of languages in the Daly River region (e.g. Marrithiyel [Green 1989], Ngan’gityemerri [Reid 1990]) as well as non-Pama-Nyungan languages more generally (e.g. Bininy Gunwok [Evans 2003], Tiwi [Osborne 1974]).

This chapter focuses mostly on the interaction of the *verb classifier* and *verb root*, which are the core predicating elements of the verb, and gives an overview of morphological structure. Tense/aspect/modality (TAM) encoding, in which MKK exhibits changes-in-progress, is discussed separately in Chapter 11. This leaves untouched the substantial topic of argument reference, which has been described in detail by Blythe (2009), and is only briefly mentioned here in the relevant sections of §8.4. The subsections within §8.4 describe all verbal morphemes for the sake of completeness, but some of these are not especially

consequential for subsequent discussions. Some readers may prefer to skip this section and use it instead as a cross-reference when required by later chapters.

## 8.2 The verb template

We can identify not just a MP verb, but also a “verb complex”, since there are some parts of the grammatical verb that are independent phonological words: the most important is the *serial verb*, which adds aspectual and postural information, and is either encliticised, or postposed as an independent word. There is also very occasionally a coverb – an uninflecting verb root that is preposed to the inflecting verb – though this structure seems quite marginal in SMP. But the core of the verb complex is a phonologically unified, and potentially very morphologically complex *main verb*, which Nordlinger (2010a) shows to be templatic in structure (more on this below).

The verb template is analysed by Nordlinger (2010a) as having nine morphemic slots, while Blythe (2009:118; 2013:891) presents a thirteen-slot model by treating the serial verb as part of the template, along with other minor analytical differences.<sup>116</sup> In Figure 8.2.1 I present a model of the entire verb complex combining the analyses of Blythe and Nordlinger:

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<sup>116</sup> Blythe attests two possibilities unattested by Nordlinger: that the reflexive/reciprocal marker (which he labels “dTrns”) can go in either slot 2 or slot 3 (while Nordlinger attests it only in slot 3); and that number markers may be suffixed to the serial verb. He also assigns a final slot to discursive particles (e.g. =*yu*, =*ya*), which I do not include in the verb template, since these are syntactically independent particles that can attach on the end of any constituent.

Another difference is between Blythe (2009) and Nordlinger (2010a) on the one hand, and Nordlinger and Caudal (2012) on the other, is in the treatment of NFUT paucal verb classifiers. Sequences like *ngarrimka* are analysed by Nordlinger and Caudal as a single fusional morpheme 1PC.SIT(1).NFUT, while the earlier works treat these as two morphemes, *ngarrim-ka* 1PL.SIT(1).NFUT-PAUC. My own position is that *-ka* must be treated as a morpheme because it is subject to “blocking” by object pronominals (§8.4.2). This means that NFUT classifier morphemes (e.g. *ngarrim*) have no distinction between paucal and plural forms.

<i>Coverb</i> †	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	<i>Serial verb</i>		
Verb root	<b>Classifier stem</b> (with fused subject) pers/num and TAM)	Object pron, Subj number, Reflexive/ reciprocal (RR)		Incorporated body part, Applicative	<b>Verb root</b>	Tense	Argument number, Adverbial			Classifier stem	* Subj number

**Figure 8.2.1 The Murrinh Patha verb complex**  
(† marginal; \* obsolescent – see §8.4.9 below)

The serial verb is represented here as a separate word, though it is not always strictly so. Degrees of binding at the right edge of the verb will be discussed in §8.5 below.

Slots 2–3 are what I call a “double-slot”; up to two morphemes can occur here from a set of candidates, and if two occur the order is not fixed. This does not adhere to canonically templatic morphology, though I will argue in a later chapter that templatic morphology in MP breaks down somewhat in the face of inter-speaker variation (§10.3, §10.6). In slots 2–3 an object pronominal *or* subject number marker may appear (but not both), and RR marker may also occur. The other double-slot is 7–8, occupied by one or two morphemes selected from subject/object number and incorporated adverbials.<sup>117</sup>

Two slots in the template can be identified as the core elements: the *classifier stem* (1) and the *verb root* (5).<sup>118</sup> Of these only the classifier stem is required for

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<sup>117</sup> Nordlinger assigns three slots here: Adverb | Subj/obj number | Adverb, but does not attest the possibility of two adverbials; my reduction to two slots here accounts for my template having one less slot than Nordlinger’s.

<sup>118</sup> Labeling the elements involved in northern Australian bipartite verbs is a terminological minefield. Nordlinger uses the terms “classifier stem” and “lexical stem”, however I prefer to call the latter a “root” since it is a large (though perhaps not open) class of lexical morphemes, and provides an invariant phonological base form for verbs. On the other hand, this “root” is unlike classical verb roots in that it is not required for all verbs. Classifiers are a much smaller closed class and do not have invariant phonological bases.

all verbs,<sup>119</sup> however I also characterise the verb root as a “core” element since it is required for encoding the semantics of most verbs. These core elements, and all other verbal morpheme types, are described in the sections that follow.

### 8.2.1 *Templatic morphology and the historical two-word verb*

Describing the MP verb as templatic essentially means that it does not conform to the sort of layered derivation and inflection typical of concatenative morphology, where each new morpheme has scope over the word unit to which it is added. An example of layered morphology can be seen in the English word [[dis[believe]]d], where *believe* is the lexical root modified first by the prefix *dis-*, and the derived *disbelieve* is then modified by the suffix *-d*.

Nordlinger (2010a) provides extensive evidence that the MP verb is not layered, but templatic. Morpheme order is determined by semantically arbitrary positioning rules, where adjacency of morphemes is irrelevant. The main planks of evidence are that the verbal predicate is encoded discontinuously on the verb classifier and the verb root; inflectional material marking subject number/gender, object number/gender and tense is also encoded discontinuously, split across either side of the root; and object pronominals, when they occur in slot 2, prevent subject number markers from appearing in that slot, though there is no semantic incompatibility at stake.

Nordlinger (2010a:337–8) points out that although the morpheme ordering of the template lacks semantic rationale in synchronic terms, there must be some historic explanation for how this structure came to be. Within the last century, MP’s sister language Ngan’gi has switched the order of a coverb + inflecting-verb (CV + IV) phrase into an IV + CV phrase, then fused both into unified templatic verbs (Reid 2003). MP must have undergone the same fusional process at some point. With IV + CV settling into a fixed order, the phonologically unified MP verb

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<sup>119</sup> This statement sets aside a small set of verbs for which the imperative can be encoded by a bare root, e.g. *mup* (“sit down!”), *puy* (“keep going!”).



has been created by (a) a stress shift that deprives some monosyllabic verb roots of their own prosodic foot (§5.10); (b) the application of stem-level morpho-phonological processes within the whole unit. Under these conditions the earlier IV + CV were transformed into the *verb classifier* and *verb root* of the contemporary template.

Synchronically the two units in MP are always contiguous, and are phonologically bound whenever morpho-phonological alternations are applicable or where a monosyllabic root causes the entire verb to be treated as a single stem for stress assignment purposes. Note however that when the verb root has two or more syllables and no morpho-phonological alternation applies, the verb has the same phonological structure as two independent words:

(8.2.1a) ,panam-ka # 'ngerren-nime  
 3PL.BE(4)-PAUC # talk-PC.MASC  
*they are talking*

(8.2.1b) ,dini-nga # 'ngerren-dha  
 3S.SIT(1).PST-1S.IO # talk-PST  
*he was talking to me* (invented examples)

In the earlier phrasal structures we can suppose that clitic clusters could attach to either the IV or the CV, and that these have become the morphemes now in slots 2–3 and 6–8. We have already seen above that some variation of morpheme ordering is recorded for these two parts of the template, and I propose that this has a diachronic explanation (cf. Blythe 2010). Bipartite verb structures are an areal feature of northwestern Australia (see also §9.2), and in several of these languages both the verbal words can host suffixes or clitics, with some flexibility as to where these attach. Example 10.8.1 shows a Jaminjung phrasal verb in which the CV hosts an aspectual suffix and a temporal-adverbial clitic, while the IV is prefixed with a subject pronominal:

(8.2.2)   guyawud-**mayan=biya**    **yirr**-agba    gurrija  
 Jam.     hungry-**CONT=NOW**           **1PL.EXCL**-BE.PST   digging  
           *hungry we had been digging*                   (Schultze-Berndt 2000:79)

Examples 8.2.3a–b show two Warlpiri phrasal verbs that use the same CV + IV elements but in opposing orders, and with the subject pronominal suffix attaching to whichever comes first:

(8.2.3a)   puta-**rna**   nya-ngu           (*typical order*)  
           some-**1s**    see-PST  
           *I saw some of it*

(8.2.3b)   nya-**ngu-rna**    puta           (*less common*)  
           see-**PST-1s**       some  
           *I saw it some more, again*   (Nash 1986, cited in Simpson 1991: 116)

In view of the structural similarity between these and the two syntactic units of the MP verb, MP (and perhaps other Daly languages) can be seen as a sort of half-way point between northwestern languages and the Top End. MP has a typical northwestern morphosyntactic structure, though it is bound into a single phonological word typical of Top End languages. In Chapter 10 I examine more extensive change and variation in these two sections of the template, and argue that changes in progress are more explicable if we view the IV + CV structure as not just as historical fact, but also as a synchronic syntactic structure underlying the MP verb.

### 8.3 Classifiers and roots

The classifier stem is a portmanteau morpheme that encodes for verb class, subject person and number, and tense. There are 38 verb classes, a first person inclusive/exclusive distinction, a four-way number split (singular, dual, paucal, plural), five tense categories, and morphological distinctions between groups of

people who are in a classificatory sibling relationship or not. Overall, this is an extremely large paradigm of almost 2000 cells; thankfully it has been documented by Walsh (1976) and Street (1987), whose separate findings are synthesised by Blythe, Nordlinger, and Reid (2007).

The classifier stem is the only obligatory element of a verb, since some classifiers can be used without lexical stems, encoding common verbal predicates such as “sit” (VC1), “stand” (VC3), “go” (VC6), “have” (VC22), “do” (VC34). The verb root is an open class of lexemes required for encoding all other predicates. The semantic interaction of MP classifiers and roots is a complex phenomenon that has been only partially analysed; the fundamentals of the structure were first described by Flynn (1950) and in more detail by Walsh (1976: 202–218), while some recent notable commentaries include Seiss and Nordlinger (2010), which interprets the interaction from a Lexical Functional Grammar perspective, and Nordlinger and Caudal (2012:79–81), which provides a compact overview.

Classifiers can be divided into three broad classes: those which are canonically used for intransitive, atelic verbs (“walk”, “sleep”), and those which are canonically used for transitive, telic verbs (“hit”, “take back”), and those which produce reflexive/reciprocal (or perhaps “de-transitivised” see below) equivalents of the latter (“take oneself back” or “go back” instead of “take (something) back”). The property of *telicity* has great significance for encoding tense and aspect (§11.3), as well as for innovative coverb structures (§9.6).

Intransitivity/atelicity and transitivity/telicity tend to go together (Wagner 2006), though there are also intransitive *telic* verbs such as “arrive”, “die”, and transitive *atelic* verbs such as “carry”, “desire”; and these can be encoded in either of the first two classes. In fact each of the classes encodes some verbs with all possible combinations of transitivity/telicity features – the semantics of the classes are merely tendencies, with the types listed above as their prototypical members. The prototypically intransitive, atelic classifiers are labelled 1–7 in the numbering system established by Blythe et al (2007), while I label them “basic intransitives” because they can all be used without roots to encode basic

intransitive meanings; but they also have a formal unity as described in §8.4.9. The other two types alternate in occupying the rest of the classifier numbering:

“Basic intransitives”	1–7
Typically transitive/telic	8–9, 11–14, 16–20, 22–23, 25–29, 31–32, 34, 38
Reflexive/reciprocal	10, 15, 21, 24, 30, 33, 36, 37

These numbers do not need to be memorised to read this thesis, and all classifiers are listed with further details in Table 8.3.1 below. Some prototypical examples are given as exx.8.3.1–3:

*Basic intransitive classifier:*

- (8.3.1) ngay **ngurru**-kampa-nu  
 1s 1s.GO(6).FUT-laugh-FUT  
 I will laugh (as I go) (Walsh 1976: 203-204)

*Typically transitive/telic classifier:*

- (8.3.2) **pan**-rtal  
 1s.SLICE(23)-chop  
 He sliced it (with a knife) (N&C: 76)

*Reflexive classifier:*

- (8.3.3) **thuy**-ma-rtal-nukun  
 2s.SLICE.RR(24).FUTIRR-hand-chop-ADVERS  
 you might chop your hand off (Street 2012: -rtal)

The reflexive/reciprocal (RR) classifiers often encode reflexive or reciprocal action, and provide RR equivalents for highly transitive classifiers to which they are clearly historically related (Nordlinger n.d.). Blythe instead labels them “detransitive” (Blythe 2009:119–126), for which I note some support in other types of detransitivised meanings, e.g. VC29-*wurl* “return (an object)” vs VC30.DTR-*wurl* “go back” (Street 2012). They also sometimes encode other

intransitive verbs not synchronically related to the classifier with which they have a detransitivised relationship, e.g. VC21-*wirndurt* “get up” – however I follow Nordlinger’s lead in labelling them RR, since this seems to be their most common function.

Table 8.3.1 provides an overview of the 38 verb classifiers of MP as documented in Blythe et al. (2007). The numbering of the classes here follows Blythe et al, as do most of the names, with a few exceptions. The classifiers with fairly transparent semantics are given a name here (used also in glosses throughout this thesis), even if the concept is not operative in all instances; other classifiers are simply given a numeric label.

Classifier number/name	3s NFUT form	Typical transitivity	Verb root?	Estimated frequency	Examples
1. SIT	dim	Intrans. (see §8.4.9)	OPTIONAL	VERY HIGH	<i>dim</i> = “he is sitting” <i>dim-rel</i> = “he is singing”
2. LIE	yibim	Intrans.	OPTIONAL	HIGH	<i>yibim</i> = “he is lying down” <i>yibim-ngurkkurrk</i> = “he is sleeping”
3. STAND	pirrim	Intrans.	OPTIONAL	HIGH	<i>pirrim</i> = “he is standing” <i>pirrim-batbat</i> = “he throws spears”
4. BE	kanam	Intrans.	OPTIONAL	VERY HIGH	<i>kanam</i> = “he is there” <i>kanam-kut</i> = “he is gathering (sthng)”
5. PERCH	pintjim	Intrans.	OPTIONAL	LOW	<i>pintjim</i> = “he is perching/aloft” <i>merrk pintja-bardi-nu</i> = “the new moon will arrive”
6. MOVE	wurran	Intrans.	OPTIONAL	HIGH	<i>wurran</i> = “he is moving” <i>wurran-lili</i> = “he is walking”
7. FEET	nungam	Intrans.	OPTIONAL	HIGH	<i>nungam</i> = “he is moving (fast)” <i>nungam-wiharart</i> = “he is running”
8. HANDS (SAY/DO)	mam	Trans. “hands” and “do”, Intrans. “say”	OPTIONAL	VERY HIGH	<i>pumam</i> = “they said” <i>mam-patha</i> = “he made (sthng)”

Classifier number/name	3s NFUT form	Typical transitivity	Verb root?	Estimated frequency	Examples
9. GRAB	mangan	Trans.	REQUIRED	MEDIUM	<i>mangan-art</i> = "he got (sthng)"
10. HANDS.RR†	mem	Intrans, Refl or Recip	REQUIRED	LOW	<i>mem-kurrk</i> = "he scratched himself"
11. HANDLE	mungam	Trans.	OPTIONAL	LOW	<i>mungam-parl</i> = "he snapped it"
12. ?LOOK	mim	Trans.	REQUIRED	LOW	<i>mim-yelerr</i> = "he peeked out" (this is the only verb root attested for VC12)
13. ??	bam	Trans.	REQUIRED	MEDIUM	<i>bam-ngkardu</i> = "he saw (sthng)"
14. BASH	bangam	Trans.	REQUIRED	MEDIUM	<i>bangam-rtal</i> = "he chopped it"
15. BASH.RR	bem	Intrans, Refl or Recip	REQUIRED	LOW	<i>bem-we-lerr</i> = "he hit himself on the head"
16. ?HEAR	bim	Trans.	REQUIRED	LOW	<i>bim-yepup</i> = "he heard it" (this is the only verb root attested for VC16)
17. ??	ban	Trans.	REQUIRED	LOW	<i>ban-pak</i> = "he put it down"
18. ??	bam	Trans.	REQUIRED	LOW	not clearly distinct from VC17
19. POKE, MOUTH	dam	Trans.	REQUIRED	HIGH	<i>dam-dharrpu</i> = "he asked (sthng)"
20. APPEAR	pangam	Intrans.	REQUIRED	MEDIUM	<i>pangam-ruy</i> = "he arrived"
21. POKE.RR	dem	Intrans, Refl or Recip	REQUIRED	MEDIUM	<i>dem-pirndurt</i> = "he woke up"
22. HAVE	kantjin	Trans.	OPTIONAL	MEDIUM	<i>kantjin</i> = "he has (sthng)" <i>kantjin-kum</i> = "he is swimming while carrying (sthng)"
23. SLASH	pan	Trans.	REQUIRED	LOW	<i>pan-rtal</i> = "he sliced it"
24. SLASH.RR	pam	Intrans, Refl or Recip	REQUIRED	LOW	<i>pam-me-rtal</i> = "he cut his foot off"
25. AGGREGATE	yingam	Trans.	REQUIRED	LOW	<i>yingam-kat</i> = "clouds have gathered"
26. SURFACE	dilam	Trans.	REQUIRED	LOW	<i>dilam-kurrk</i> = "he sharpened it"
27. HEAT	ningam ~ ninangam	Trans.	REQUIRED	LOW	<i>ningam-tji</i> = "he cooked it"
28. WATCH	dirran ~ dirrangan	Trans.	REQUIRED	LOW	<i>dirran-batj</i> = "he watched (sthng)"
29. TURN	wurdan	Trans.	REQUIRED	HIGH	<i>wurdan-wurl</i> = "he returned (sthng)"
30. TURN.RR	wurdam	Intrans, Refl or Recip	REQUIRED	HIGH	<i>wurdam-wurl</i> = "he went back"

Classifier number/name	3s NFUT form	Typical transitivity	Verb root?	Estimated frequency	Examples
31. ?EAT	wulam	Trans.	REQUIRED	LOW	<i>wulam-atj</i> = “he ate it” (this is the only verb root attested for VC31)
32. PULL	yungan	Trans.	REQUIRED	LOW	<i>yungan-ngkabang</i> = “the water receded”
33. PULL.RR	yungam	Intrans, Refl or Recip	REQUIRED	LOW	<i>yungam-ratjtatj</i> = “he stretched himself”
34. SAY/DO <sup>120</sup>	mam	Trans. “do”, Intrans. “say”	NEVER	VERY HIGH	<i>mam</i> = “he said/did (sthng)”
35. ?CROUCH	kanthangan	Intrans.	REQUIRED	LOW	<i>kanthangan-ngkardal</i> = “he’s balancing on a floating log”
36. WATCH.RR	dirrim	Intrans, Refl or Recip	REQUIRED	LOW	<i>dirrim-ngkarirt</i> = “he looked at his reflection”
37. SURFACE.RR	dilim	Intrans, Refl or Recip	REQUIRED	LOW	<i>dilim-martum</i> = “he dried his hands”
38. ??	ningam	Intrans, Refl or Recip	REQUIRED	LOW	(Maybe RR for VC27?)

**Table 8.3.1 Murrinh Patha verb classes. Shading is used to highlight values relevant for various points of discussion.**

### 8.3.1 Combining classifiers and roots

I provide here my own brief account of the interaction between MP verb roots and classifiers. This section is intended to contextualise the discussion of MP verb morphology that follows, though an in-depth discussion of verb semantics and classifier selection in MKK is too vast a topic to fit in this thesis.<sup>121</sup>

<sup>120</sup> When combined with a lexical stem, classifier 8 usually denotes transitive verbs using the hands; but when used without a lexical stem, it means “say” or “do”, and appears to be converging with the formally similar classifier 34. Some inflected forms differentiate classifiers 8 and 34, for example 2S.FUT, *na* vs *thama*; 3PL.FUT, *puma* vs *puyema*. But there is no obvious rule determining the use of one or the other, except that the monosyllabic *na* appears to be avoided as a monomorphemic verb.

<sup>121</sup> During my fieldwork I collected substantial data on MKK verb classifier selection. The analysis of this data is too large a topic to fit alongside others in this thesis, but is projected as a

When a verb classifier combines with a verb root, the predicate thus formed is often a composite of semantic contributions from the two respective morphemes, though there are also instances where the combination is highly lexicalised and no distinct productive semantics can be analysed for one or both of the morphemes. The compositional instances are typical of verb classifiers as they are found across northwestern Australia, with the classifier (often labelled an “inflecting verb”) usually adding valency, Aktionsart and motion vector specificity to a root (“uninflecting verb”) that is the semantic head of the predicate (McGregor 2002:29). But in the lexicalised instances the classifier and root do not have independent semantic contributions. In such instances the “classifier” does not actually function as a classifier, but rather as a lexicalised conjugation class – though I retain the label *verb classifier* for this morpheme class since most instances show some degree of classificatory compositionality. Examples of each type are illustrated below.

Where the verb root interacts with a classifier in a semantically transparent manner, then naturally this tends to license the use of a range of classifiers, resulting in distinct predicates. The best documented examples are those where the classifier specifies the posture or motion of an intransitive subject (ex 8.3.1), or the type of motion and instrument used in a transitive action (8.3.2), or determines Aktionsart and valency (8.3.3):

- (8.3.1a) ngay **ngurru**-kampa-nu  
 1s 1S.GO(6).FUT-laugh-FUT  
*I will laugh (as I go)*

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future separate research project. It appears that all SMP classifiers still maintain some use in MKK, with the exceptions of PERCH(5) and CROUCH(25).



(8.3.1b) ngay **ngirra**-kampa-nu  
1s 1s.**STAND(3)**.FUT-laugh-FUT  
*I will laugh (while standing)* (Walsh 1976: 203-204)

(8.3.2a) **bangam**-rtal  
1s.**BASH(14)**-chop  
*He chopped it (with an axe)*

(8.3.2b) **pan**-rtal  
1s.**SLICE(23)**-chop  
*He sliced it (with a knife)* (N&C: 76)

(8.3.3a) kardu perrkenku **mungam**-ngintha-parl=dim  
PERS two 3s.**HANDLE(11)**-DU.FEM-break=SIT(1).SER  
*the two of them are breaking it* (PA, PSE)

(8.3.3b) **dim**-parl  
3s.**SIT(1)**-break  
*it's broken* (DP, Notes, 2012-06-16)

Some classifier alternations seem to show an intermediate degree of lexicalisation, where there is enough semantic commonality to distinguish a particular contribution from the root, though the contribution of various classifiers is opaque. Another way of putting this is to say that the classifiers have only “prototypical” meanings: some classifier-root combinations cluster close to this core, while others are outliers (Nordlinger, *p.c.*). In example 8.3.4 the root *-thap* contributes a meaning of tentative and deliberate contact by an agent on an inanimate object; but the contribution of the alternating classifier is transparent only for (a):

(8.3.4a) **ma**-thap-nu  
 1S.**HANDS(8)**.FUT-touch-FUT  
*I'll touch it (with my hand)*

(8.3.4b) mi kanyi **ba**-thap-nu  
 VEG PROX 1S.**BASH(14)**.FUT-taste-FUT  
*I'll taste this food*

(8.3.4c) nantji pana **ngur**dan-thap  
 THING ANAPH 1S.**TURN(29)**-test  
*I tested that thing* (Street 2012: -thap)

An example of a highly lexicalised classifier is *bam* (VC13). I cannot detect any semantic pattern among the verb meanings VC13 produces in combination with various roots, such as:

-gurduk	“drink (something)”	
-mardabu	“betray”	
-mekat	“stumble”	
-ngkardu	“see”	
-yegarl	“drop”	
-yilil	“be in the middle”	(Blythe 2010, Street 2012)

There are also cases where the change of classifier results in meanings that appear completely unrelated, such that the roots may be regarded as homophonous but distinct lexemes:

(8.3.5a) kardu wakal ma-**lele**-nu  
 PERS child 1S.**HANDS(8)**.FUT-**quieten**-FUT  
*I'll quieten the child*

(8.3.5b) ku were kanyi-ka ba-nyi-**lele**-nukun  
 ANIM dog PROX-TOP 3S.**BASH(14)**.FUT-2S.DO-**bite**-ADVS  
*this dog might bite you* (Street 2012: -lele)

There are some homophonous but semantically distinct verb roots that can take the same classifier, so that only context distinguishes between the possible predications:

(8.3.6a) **ngi-ku-nu**  
1S.SIT(1).FUT-**fish**-FUT  
*I'll go fishing*

(8.3.6b) **ngi-ku-nu**  
1S.SIT(1).FUT-**run**-FUT  
*I'll run*<sup>122</sup> (Street 2012: -ku)

Example 8.3.6(b) also illustrates another point: that even the most semantically transparent classifiers, such as *dim* SIT(1), have exemplars that depart radically from their general semantic characterisation. In 8.3.6(b) the use of SIT(1) in a verb meaning “run” is quite opaque, if not paradoxical.

I have stated that the root is the semantic head of the verb, with the classifier modifying the predication in the dimensions of valency, Aktionsart, motion vector and instrument. But this head-modifier relation is not always clearly maintained (N&C: 79–80). For example, *ningam* HEAT(27) seems to specify a particular type of transitive contact involving the application of heat and light. Examples 8.3.6a–b show it combining with two verb roots which appear to modify its meaning to specify different manners or perhaps objects of heat application. These roots are not attested with any other classifiers, so they cannot be assigned independent meanings, but rather seem to modify the general meaning of HEAT(27):

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<sup>122</sup> Street translates this as “I’ll move fast”.

(8.3.7a) **nginangan-tji**  
 1S.HEAT(27)-**cook**  
*I cooked it* (Street 2012: -tji)

(8.3.7b) ku yagurr ninga-**rdatj** dim  
 ANIM goanna 3S.HEAT(27)-**singe** SIT(1).SER  
*he's singeing the goanna* (Street 2012: -rdatj)

But HEAT(27) also combines with *-re*, to which we can attribute an independent meaning, “sizzle”, since it alternates with multiple classifiers. In these instances HEAT(27) could be seen as one of a pair of valency alternates, with HEAT(27) producing a transitive verb and POKE.RR(21) an intransitive “middle verb”:

(8.3.8a) **ngina-re-nu**  
 1S.HEAT(27).FUT-sizzle-FUT  
*I'll sizzle it on the fire*

(8.3.8b) ku ngen **dem-re** pirrim  
 ANIM meat 3S.POKE.RR(21).sizzle STAND(3).SER  
*the meat is sizzling* (Street 2012: -re)

In all these instances, and others (e.g. *-ngkardi* “reflect sun in someone’s eyes”), HEAT(27) contributes to verbs involving application of heat or light. For this verb classifier at least, there is no clear head-modifier relationship between classifier and root, but rather an a-hierarchical relationship involving joint semantic contribution (cf. Schultze-Berndt 2000:215–218).<sup>123</sup>

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<sup>123</sup> The simplified description of MP verbs as deploying “classifiers” suggests an *arboreal* lexicon in which verb roots branch out into various dependent classifier combinations. But some areas of the lexicon appear to be more *rhizomatic*, more accurately represented as a network of same-level nodes (Deleuze and Guattari 1980 [2004]).

### 8.3.2 Subject and TAM encoded on classifier

As mentioned above, each classifier conjugates to specify some 10 person / number categories, and 5 TAM categories, giving a paradigm of some 50 fusional morphemes for each classifier. However, there is substantial syncretism among both person/number and TAM categories, meaning that most classifiers have around 25–35 distinct forms distributed unpredictably across the 50 cells in the paradigm. For example the classifier *ban* VC17 has 34 distinct forms, as illustrated in Table 8.3.2. Two more classifier conjugations can be seen in §11.2, while the full set of conjugations are documented in Blythe et al (2007) – reproduced as Appendix VI to this thesis.

VC17		NFUT	PST	FUT	FUTIRR	PSTIRR
<b>Sing.</b>	<b>1</b>	ban	buni	bu	bu	buy
	<b>2</b>	dan	duni	du	du	duy
	<b>3</b>	ban	buni	bu	bu	buy
<b>1 incl.</b>		thuban	thubuni	pubu	pubu	thubuy
<b>Pauc.</b>	<b>1</b>	-	ngubune	ngubu	ngubu	ngubuy
	<b>2</b>	-	nubune	nubu	nubu	nubuy
	<b>3</b>	-	pubune	pubu	kubu	pubuy
<b>Plur.</b>	<b>1</b>	nguban	ngubuni	ngubu	ngubu	ngubuy
	<b>2</b>	nuban	nubuni	nubu	nubu	nubuy
	<b>3</b>	puban	pubuni	pubu	kubu	pubuy

**Table 8.3.2 Paradigm of verb prefixes for MP verb class 17 (Blythe, Nordlinger, and Reid 2007). Shading indicates syncretic forms that have “already appeared” reading top-to-bottom and left-to-right.**

There is no parsimonious analysis of morphemic structure within verb classifiers, though it is clear enough that they have evolved from multimorphemic structures (e.g. all NFUT forms end with /n/ or /m/, all first-person forms begin with /ŋ/, /b/ or /m/. An analysis of the patterns, and their failure as morphological analyses, is in Forshaw (2013:24–30).



(8.4.3) kardu bere-ngatha walalayingka parnamka-ngime  
 PERS then-still wave 3PC.BE(4)-PC.FEM  
*people are still waving* (Bunduck 1985:14)

(8.4.4) ku mira detj ngamam  
 ANIM egg.lice crack 1S.DO(34)  
*I squashed the egg lice* (Street 20120, *detj*)

Street’s dictionary generally does not include borrowed forms, but archival recordings reveal occasional English verbs being borrowed as coverbs in combination with the SAY/DO(34) classifier:

(8.4.5) i **tra**i ngamamka-nime ngankunime  
 and **try** 1PC.DO(34)-PAUC.MF 1PC.FEM  
 ku **pishing** karda nganaka  
 ANIM **fishing** PROX you.know?  
*and we tried to go fishing there, you know?* (Walsh 1986, Tape 10)

(8.4.6) bere kardu=warda **merit** mam  
 then PERS=IMM **marry** 3S.DO(34)  
*then they “got married” (had sexual intercourse)* (Stanner 1958)

Coverbs are not mentioned in any existing grammatical description of MP,<sup>125</sup> suggesting that this was a somewhat marginal morphosyntactic category that has gradually grown with the increasing use of verbs borrowed from English/Kriol. On the other hand, it is clear that coverbs are diachronically

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<sup>125</sup> Walsh (1996a) describes a class of “vouns” that have some commonality with what I label “coverb”, in that both place a verb root before a classifier (e.g. pakpak-mam-be, cramp-3S.HANDS(8).NFUT-arm, “his arm is cramped”). But there are also significant differences: the root of a voun joins the subsequent morphemes in a unitary phonological word; vouns combine only with VC8; based on Walsh’s examples, vouns appear to encode copula clauses only. In short, these appear to be the remnants of an earlier CV + IV phrasal structure, which is not quite the same as the now emergent phrasal structure described in Chapter 9.

related to incorporated verb roots, as some of the forms mentioned above can appear in both roles. It is not clear why the vast majority of verb roots in SMP can only be incorporated, while just three roots combining with *-ngka* “look” can or must be used as independent coverbs.

With the small number of known coverbs, and sparse attestation of their usage, it is difficult to demonstrate that this is a distinct word class in SMP, or to determine whether the borrowed coverbs should be treated as belonging to the same word class as the indigenous ones. There does appear to be some difference, in that the indigenous coverbs mostly combine with inflecting verbs that have a second verb root embedded, while borrowed coverbs combine only with the rootless inflecting verbs SAY/DO(34). Further discussion of these matters will be deferred to the next chapter, where data from MKK provides more extensive evidence.

#### 8.4.2 Object pronominal, Subject number (slots 2, 3)

Where the verb has a pronominal direct object, indirect object or ethical dative (Blythe 2010), it is encoded here (ex 8.4.7). Multiple pronominals cannot appear together, and if there is conflict the direct object “wins” (Walsh 1996b:332). Inanimate objects are not marked in the verb template.

(8.4.7)	mi	wakal=kathu	me-na	dini-dha
	VEG	little=DEMAND	3S.SAY(34).PST-3s.10	SIT(1).SER-PST
		<i>“give me some food”</i>	<i>he said to him</i>	(GIM, Video-3.3)

Where the verb subject number is dual (non-sibling), this number is marked through a combination of singular classifier stem, and dual number marker in this double-slot (*-ngintha* = dual female or mixed gender, *-nintha* dual male) (8.4.8). But the dual subject number marker cannot co-occur with an object pronominal: when a pronominal is present, the dual subject number marker “moves” to slot 7 instead (8.4.9).







appear together, it is more common for the RR marker to come second (Blythe, Nordlinger, *p.c.*; see also §8.4.3).<sup>126</sup>

#### 8.4.4 Incorporated body part / applicative (slot 4)

There are 34 attested incorporated body part morphemes, which are in most cases distinct from the freeform body part nouns, but show an etymological relationship (e.g. “hand” = *mange* [free form], *-ma* [incorporated form]). An incorporated body part adds specificity to the verbal predicate by indicating the body part that is the target of a transitive verb (ex. 8.4.13), or the instrument involved in the action, or sometimes plays a more metaphorical role (8.4.14) (Walsh 1996b; Forshaw 2011). Alternatively, an applicative marker *-ma*, etymologically based on the incorporated form of “hand”, may occupy this slot, serving to promote a source or adversely affected argument to the function of a direct object (Seiss and Nordlinger 2010; Nordlinger 2011).

(8.4.12) mam-nyi-**me**-purl

1S.HANDS(8)-2S.DO-**foot**-wash

*I washed your feet*

(Walsh 1996b:329)

(8.4.13) litjpur      du-**rdarri**-pak      ngarra      palyirr

axe              2s.17.FUTIRR-**back**-put      LOC      stone

*put your axe on top of the stone*

(Walsh 1996b:349)

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<sup>126</sup> I have seen data attesting the sequences -RR-OBJ, -RR-DUAL (Blythe 2005 Field Notebook 4: 71–79), and -DUAL-RR (ibid; and Nordlinger 2010a: 326). But the -RR-DUAL sequence is probably a relic of the dual marker’s recent history as an ethical dative object marker, in which role it occurred as an -RR-ED sequence (Blythe 2010:178). As a dual number marker this sequence is obsolescent, explaining why it is not found by Nordlinger with her younger speakers. This would then suggest -DUAL-RR-OBJ as a general morpheme ordering, though this is inconsistent with Nordlinger’s evidence (§8.4.2) that the dual and object morphemes occupy the same position.

For MKK speakers -DUAL-OBJ is additionally attested – see footnote to §8.4.2 above.

- (8.4.14) pumangan-ngi-**ma**-kut  
 3PL.GRAB(9)-1S.DO-**APPL**-collect  
*they took it from me* (Seiss and Nordlinger 2010:428)

IBPs show a strong historic tendency to form lexicalised combinations with verb roots – i.e. compounds where the semantics become non-compositional and the combination must be treated as its own lexical entry (these are elsewhere glossed as single morphemes:

- (8.4.15) ma-nyi-**ngka-tum**=nukun  
 3S.DO(8).FUTIRR-2S.DO-**eye-???**=APPREH  
*you might get hazy vision* (Street 2012, **-ngkatum**)

- (8.4.16) mam-**we-rtert** wurrān  
 3S.DO(8)-**hair-???** GO(6).SER  
*his hair always stands on end* (Street 2012, **-wertert**)

#### 8.4.5 Verb root (slot 5)

An open class of verb roots, described in §8.3 above.

#### 8.4.6 Tense marker (slot 6)

Tense markers combine semantically with the verb Aktionsart, and sometimes with a postposed serial verb, to encode tense, aspect and modality. The fact that not just tense but also aspect and modality may be partially encoded in the slot 6 marker makes the label “tense marker” technically inadequate, but to avoid gratuitous changes of terminology from previous MP scholarship, I maintain this label. The grammatical function of this slot is discussed in detail in Chapter 11.

Descriptions of MP TAM imply that the tense marker is an obligatory part of marking these categories (N&C), but there is some evidence of the future *-nu* and

past *-dha* markers being optional. Walsh (1976:116) mentions in passing that *-nu* is “often deleted”, though based on available materials the phenomenon does not seem common in careful speech.<sup>127</sup> On the other hand, in the relatively small amount of SMP data I have reviewed I have noticed a few examples where *-dha* is expected but absent (indicated here with ~~strikethrough~~):

(8.4.17) pana=da-wangu ngurrini-~~dha~~ ngini  
 ANAPH=PLACE-DIR 1S.GO(6).PST-~~PST~~ SIT(1).SER  
*I was heading over that way* (Walsh 1986: Tape 57)

(8.4.18) i medeyi ngardi-~~dha~~-ngime  
 and hungry 1PC.BE(4).PST-~~PST~~-PC.FEM  
*and we were hungry* (Walsh 1986: Tape 10)

As we will see in §10.3.3, these may be examples of a “blocking” effect that is quite clearly attested in MKK.

#### 8.4.7 Adverbial “endoclitics” (slots 7–8)

A small range of adverbs can be inserted here to colour or modify the verbal predication. All of these adverbial modifiers, except for *-tharra*, appear more often as enclitics attached to nominals (see ex. 8.4.6 above). The rather paradoxical situation of a clitic element occurring inside affixes is further discussed in §8.5 below.

The following are the attested forms, their meanings, and the glossing conventions used in this thesis:

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<sup>127</sup> Walsh does not distinguish use of *-nu* for future indicative versus non-use for various future irrealis modalities, as documented by N&C. This may account for his observation of *-nu* “deletion”.

<b>Adverbial</b>	<b>Meaning</b>	<b>Gloss</b>	<b>Examples</b>
<i>-warda</i>	“imminent”, either just happened or about to happen	IMM	8.4.6
<i>-tharra</i>	moving	MOVING	-
<i>-kathu</i>	oriented towards speaker	HITHER, DEMAND	8.4.7
<i>-wangu</i>	moving in the direction of some specified point	DIR	8.4.17
<i>-deyida</i>	“again”, “still”, “also”; iterative action	ITER	5.8.1

**Table 8.4.2 Adverbial particles**

#### 8.4.8 Subject number / Object number marker (slots 7–8)

Number markers share this double-slot with the adverbials. This can be a dual marker (*-ngintha* fem./mixed, *-nintha* masc.) for objects, or for dual non-sibling subject when the marker is blocked from slot 2 by the presence of an object marker (ex. 8.4.8, and see §8.4.2 above).<sup>128</sup> Alternatively, the paucal number markers (*-ngime* fem./mixed, *-neme* masc.) occur in this slot to mark the number of either verb subject or object. This creates a conflict for any verb that has dual non-sibling subject and a paucal object, or a paucal subject and dual object; in such cases it is the object number marker that is included in the verb, while the subject number marker is absent, leaving the verb subject underspecified for number (Blythe 2009:132).

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<sup>128</sup> According to both Blythe and Nordlinger, the dual subject marker only moves to the post-root position when it is “blocked” from slot 2/3 by the presence of an object pronominal. However my data contains at least one instance of post-root dual subject marking without any object pronominal: *nukunu kas-ngay pana me-berti-nintha ne* “he and my cousin came along together” (GM, 2011-09-17\_03).



surprising, since the discarded markers are functionally redundant, only repeating information that is already encoded on the main verb.

Example 8.4.20 illustrates the reduced form: the main verb here uses the classifier *dirran*, which for simplicity I gloss as third-person singular (but see Table 8.4.1 above). The addition of the dual masculine number marker in slot 2 encodes dual (non-sibling) subject. The serialised classifier *pirrim* does not have its own suffix to specify dual subject, but instead infers this from the main verb. Elsewhere in this thesis I do not gloss subject person/number specifications for serial verbs, since they agree categorically with the specification on the main verb classifier.

(8.4.20) **dirran-nintha-nu-batj=pirrim**

**3s.28-DU.MASC-RR-watch=3s.STAND(3).SER**

*the two of them are looking at each other (while standing)*

(Nordlinger 2010b:2)

Besides contributing aspectual information, the choice of verb classifier for the serial verb adds postural information to the main verb in ways that correspond with the independent meaning of the serial verb classifier – e.g. *STAND(3)* may be selected as serial verb if the actor in the main verb is standing up (N&C: 87-9).

## 8.5 Structural status of morphemes to the right of the verb root

The morphemes to the right of the verb root – tense, argument number, adverbial and serial verb – are not tightly bound to the rest of the verb. The adverbial and tense morphemes behave more like clitics, while the serial verb is somewhere between a clitic and an independent word. Phonologically the entire sequence to the right of the root is in the “clitic group” domain (§5.9.2) rather than the stem domain.





- (8.5.3) ngay ku nga-warl-**nu** → [ɲaj gu ʔjawa**ɲu**]  
 1s ANIM 1S.POKE(19).FUT-spear-FUT  
*I'll spear the animal* (Walsh 1986:Tape 01)
- (8.5.4) ne-rel-nime → ['ne.ɽe**llime**]  
 2PC.SIT(1).IRR-sing-PC.MASC  
*all of you will sing* (AnB, VPE)
- (8.5.5) bere pumpan=**warda** → ['be.ɽe ʔpumban**wad̥a**]  
 END 3PL.go(6)=IMM  
*they're leaving now* (Walsh 1986:Tape 00)
- (8.5.6) ngunungam=**warda** → ['ɲunuŋam**paɖa**]  
 1S.FEET(7)=IMM  
*I'm going now* (Blythe 2004-06-24)

Adverbials obviously have a loose syntactic binding, since they can appear as clitics on totally separate constituents (see §10.4.1); but this is also true to some extent of tense/mood markers, which have a lesser tendency to mobility:

- (8.5.7) nakurl-**nu**-nakurl-**nu** nga-mpa-mut-**nu**  
 later-FUT-RDP-RDP 1S.POKE(19).FUT-2S.IO-give-FUT  
*I'll give it to you a bit later* (Blythe 2004-08-13)

With purely temporal markers this mobility seems rare, but the modal *-nukun* (adversative/admonitive) that also occupies the tense slot is highly mobile. Examples 8.5.8 and 8.5.9 show *-nukun* attaching to the verb and to the negator particle *mere* respectively.

(8.5.8) mere na-ngi-matjputj-**nukun** thurru  
 NEG 2S.HANDS(8).FUTIRR-1S.DO-interrupt-**ADMON** 2S.GO(6).FUTIRR  
*don't you continually interrupt me* (Street & Street 1989: -matjputj)

(8.5.9) mere=**nukun** thurdu-thuk<sup>129</sup>  
 NEG=**ADMON** 2S.TURN(29).FUTIRR-send  
*don't you send it* (Street 1996:214)

The position of the tense marker with respect to the argument number marker also seems to have a marginal flexibility. One MP speaker of the Mission era (LK, b. 1939) places the future tense marker (but not the past) after the number marker:

(8.5.10) nantji=kama pi-wurrrpurrk-neme-nu=warda le patha pi-neme-nu  
 THING=maybe 1INCL-dance-PC.M-FUT=IMM happy 1INCL-PC.M-FUT  
*let's party!* (LK, WAVA 2000-11-20)

And again, a hyper-articulated verb elicited by Walsh (1986) is produced with the tense marker to the right of the number marker – though perhaps this is merely an aberration caused by hyperarticulation, and somehow related to the other oddity of this example – that there is distinct pause between the verb root and its suffixes:

(8.5.11) pu-raratj#nime-nu  
 1INCL.SLASH(23).FUT-flay#PC.MASC-FUT  
*we'll skin it* (Walsh 1986, Tape 15)

I assume that such re-ordering must have been fairly unusual in standard MP, since it is not attested in the descriptions by Walsh (1976), Street (1987) or N&C. Or perhaps this ordering was used by particular speakers (like LK) with whom

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<sup>129</sup> Apparently a polysemous verb root, -*thuk* can be found elsewhere in this thesis meaning “fight”.

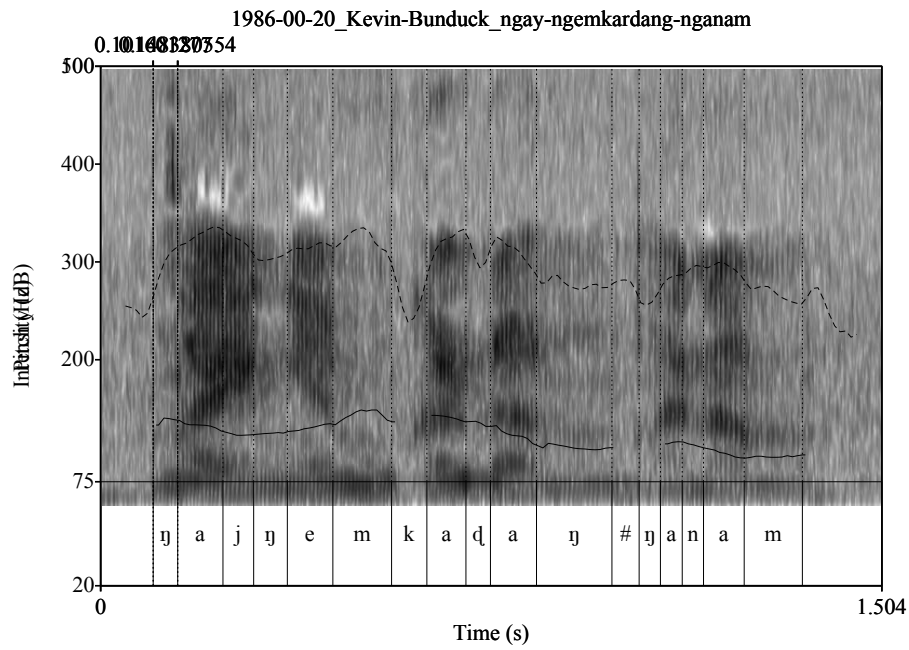
Walsh and Street did less language work. By contrast, we will see in the next chapter that this has become the standard order in MKK.

### 8.5.1 *The status of the serial verb*

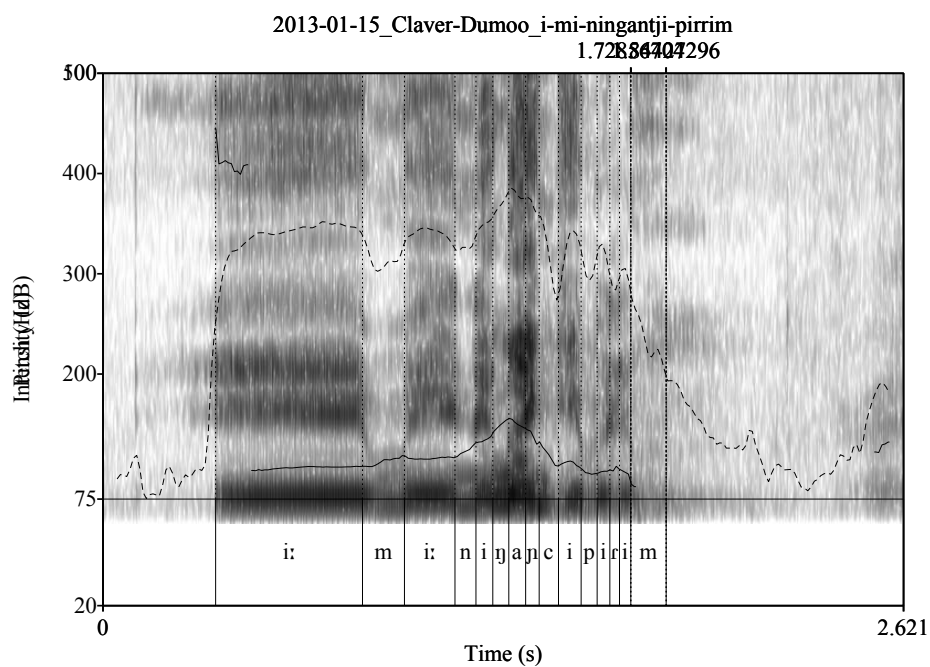
Serial verbs are syntactically bound in that they always occur directly to the right of the main verb that governs them; but they are independent in that they select from a sub-set of the verb classifiers (in particular, the basic intransitives) which in general are independent words. Phonologically, serial verbs are quite variable in whether they are realised with word stress and/or a preceding pause, or realised as enclitics with no stress. This variability is reflected in the fact that they are treated as independent words by Street (1987: 55–56), but as enclitics by both Blythe (2009: 128–134) and N&C (pp. 87–89).

The bimoraic minimum constraint would provide an excellent diagnostic as to whether serial verbs display word-like or affix-like phonological properties. Unfortunately, however, monosyllabic CV serial verbs are quite rare, and I have not been able to identify any in the SMP archival recordings used for this study.

In example 8.5.12 the serial verb *nganam* is pronounced as a separate metrical foot – signalled by the slight increase in pitch and intensity on its first syllable (see §5.10), and preceded by a short pause. By contrast, 8.5.13 shows the serial verb *pirrim* pronounced without any phonetic prominence on its initial syllable, without any pause:



(8.5.12) ngay ngem-ngkardang nganam  
 1s 1s.SIT(1)-orate BE(4).SER  
*I'm orating* (Walsh 1986:tape 20)



(8.5.13) mi ningam-tji=pirrim  
 VEG 3S.HEAT(26)-cook=STAND(3).SER  
*he's cooking* (CD, 2013-01-15)

Clearly serial verbs have been independent words at some point in the evolution of the MP verb complex, and they can variably still be realised as such. I reflect this by treating them as independent words in my verb template for standard MP, which aims to represent the most conservative forms so as to maximise contrast with the MKK template described in Chapter 10. But SMP phonology shows some limited signs of integrating them into the verbal word.

In MKK both syntactic and phonological evidence suggests that the serial verb is further advanced on a grammaticalisation path of integration into the verbal word.

## **8.6 Summary**

We have seen in this chapter that the verb is the site of much grammatical complexity in MP, and in the following chapters we will explore various dimensions in which it is the site of grammatical variation and change.

The interaction of MP verb classifiers and roots is undoubtedly one of the most substantial topics for description, but it is in fact such a complex topic that it cannot be covered comprehensively in this thesis, though it is discussed somewhat obliquely in the following two chapters. More manageable topics are found in morphosyntactic phenomena that were marginally attested in SMP: the use of verb roots as independent “coverbs”, reordering and deletion of verb suffixes, and the ongoing grammaticalisation of the serial verb as an imperfective marker. It is these topics that will be taken up for descriptions of MKK in the next two chapters.

## The rise of phrasal verbs

### 9.1 Introduction

In this chapter we will see that phrasal verbs, a marginal structure in standard Murrinh Patha (SMP), have coalesced into a major verb type in Murriny Kardu Kigay (MKK). The phrasal coverb + inflecting-verb (CV + IV) structure occurs quite frequently in both elicited and natural MKK speech, though it is still less common than the traditional polysynthetic verb structure.

The lexicon of coverbs gathered so far from my data comprises 15 indigenous coverbs and approximately 85 borrowed coverbs. Though the majority of MKK coverbs are borrowings from English/Kriol, the structure is also used with indigenous MP roots, all of which are identical or clearly cognate with incorporated verb roots. I will argue that lexical borrowing is the primary cause of this structure's expansion, though it may have been further encouraged by the presence of CV + IV structures in surrounding Aboriginal languages.

The MKK phrasal verb is developing a systematic atelic/telic split in verb classifier selection, which is clearly related to covert categories in the polysynthetic verb system, which are now given overt morphological marking. We should expect syntactic innovation to be taking place in the phrasal structure, because it is the *productive* structure in which new verbal expressions are coined in MKK, whereas polysynthetic verbs are not used for coining new lexical forms. The extent to which we can trace the path of change from SMP is limited by the scarcity of data for what is quite a rare structure in the older forms of speech; but between the phrasal verb data presented in this chapter, and

synthetic verb morphology data presented in the next, it is clear that the morphosyntax of verb roots is incrementally changing.

## 9.2 Coverbs across north-western Australia

CV + IV phrasal verbs are an areal feature of north-western Australia, where they appear on both sides of the Pama-Nyungan line. Among various terminological alternatives, “preverb” has also widely been used as a label for coverbs, though I prefer the latter term since they do not always occur before the IV.<sup>130</sup>

Inasmuch as SMP lacks coverbs, or has them only marginally, it is quite isolated in the north-western Australia. MP’s immediate neighbours, the Marri languages, the Ngan’gi dialects, and Emmi/Mendhe further up the coast, use a few coverbs, but predominantly use polysynthetic verbs much like MP (Green 1989; Ford 1998; Reid 1990; see also §9.9 below). But throughout the rest of the Daly region, and in neighbouring language groups to the east and the south, CV + IVs are core verbal structures. This generalisation takes in Jaminjung, Ngarinyin, Kija and Ngumpin-Yapa languages to the south and southwest; Wagiman and Wardaman to the east; and Malak-Malak and Maranunggu to the north. Somewhat further afield, the structure is also found in languages of east Arnhem Land, on the Tiwi islands, and though it is not the primary verb structure in Gunwinyguan languages, their typically incorporated verb roots can also in some cases be “excorporated” as independent coverbs (Baker 2014:7). However I do not propose to make an areal survey here, but rather to point out that MP is something of a synthetic island in a sea of CV + IV.

Unsurprisingly, there is much variety among the types of CV + IV structures in the area. In most cases the typical order is CV + IV, with the CV as a phonologically and syntactically independent word (e.g. Gurindji [Meakins and O’Shannessy 2012] and Jaminjung [Schultze-Berndt 2000]). In Warlpiri the

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<sup>130</sup> A review of terminological differences can be found in Schultze-Berndt (2003:146), who uses the term “preverb” to draw out a comparison with Indo-European preverbs.



structure is somewhat more tightly bound, though the two elements show occasional independence (Nash 1982), while in Gooniyandi the CV is syntactically bound to the IV, though the two behave like separate words in terms of stress assignment (McGregor 2002:42). In Maranunggu the common ordering is the reverse of the others – IV + CV – which is therefore more isomorphic with MP and the Marri languages, except that the verb root is an independent word:

(9.2.1) winyingkiny      **kangara**   **purity**      **anini**      **yi**  
M.nggu. boomerang      **1S.HANDS**   **make**      **NOW**      **PST**  
*I have just made a boomerang*      (Tryon 1970:43)

(9.2.2) **ngirr-vuritj-a**      yigin  
Marri Tj. **1S.HANDS-make-PST**      1s  
*I made it*      (CD, 2013-06-25)

Two distinct approaches to the syntax and semantics of the CV + IV are represented in McGregor (2002) and Schultze-Berndt (2003). The former focuses on structures where the CV provides lexical meaning, and the IV specifies valency, vector and Aktionsart properties. The IV governs the verb’s arguments and therefore might be analysed as an auxiliary at the syntactic head of the verb phrase. McGregor labels this function “event classification”. Schultze-Berndt by contrast focuses on dual-headed, complex predicate structures, where both CV and IV contribute to governance of verb arguments (cf. Amberber, Baker, and Harvey 2010). She explicates the following as an example of a complex predicate:

(9.2.3) wirib-di      **jag**      gan-**ardgiya**-ny      thanthiya      munurru  
dog-ERG      **go.down**      3s>3s-**throw**-PST      DEM      bee  
*the dog threw down those bees*      (Schultze-Berndt 2003:168)

Here the predication is a semantic complex of THROW and GO DOWN. The IV *ardgiya* “throw” governs both the dog and the bees, while the CV *jag* “go down” governs the bees only.

As we have seen in the previous chapter (§8.3), MP verbs instantiate both the dual-headed structures described by Schultze-Berndt, and the classifier-as-head structures described by McGregor. There is also in MP, and in the CV + IV languages generally, a mixture of highly productive combinations, through degrees of compositional opacity, to completely lexicalised compounds in which one or both elements are non-productive (e.g. Nash 1982).

### 9.2.1 CV + IV with borrowed coverbs

The CV + IV structure is globally a very common way for languages to borrow verbs. It is attested especially in language varieties born of intense contact situations, such as Town Bemba (Spitulnik 1999), Montagnais French (McConvell 2008:197), and Bilingual Navajo (Schaengold 2004:50–60). But it is also common in more lexically stable languages, for example Hindi (Muysken 2000), and Myers-Scotton goes so far as to propose that this borrowing structure “knows no typological or geographic limits” (2002:134).

In northern Australia CV + IV structures are widely used for borrowing English/Kriol verb roots, as documented for languages including Jaminjung (Schultze-Berndt 2007) Gooniyandi (McGregor 2002:94), Tiwi (Lee 1987), Marra (Amberber, Baker, and Harvey 2010:16) and Warumungu (Simpson 1985). In these instances, most or all of the indigenous IV paradigm remains productive in combining with borrowed CVs, which are deployed in the same way as indigenous CVs.

For example, when *learn* is borrowed into Gooniyandi, semantically shifted in this instance to mean “teach”, the suffix *-a*, classifies the event as “continued contact action on an entity” (McGregor 2002: 57).

(9.2.4) marlŋarri-ngga ngamoo **learnim**-gila-Ø-yin-birr-a  
 Goon. whitefella-ERG before **teach**.FACT-PA-LEX.ACC-3PL.NOM-CLASS:A

wilangi wilangi  
 behind behind

*we used to be taught by white people back in the old days*

(McGregor 2002:95)

When *look after* is borrowed into Jaminjung, a HANDLE classifier verb is used, which in general classifies events of “physical or psychological manipulation”:

(9.2.5) jalig-di **lukabta**-im bun-**ngangu** ngibud-gi  
 Jam. child-ERG **look.after**-TR 3PL:1S-HANDLE.PST night-LOC  
*the children looked after me at night* (Schultze-Berndt 2007:372)

We will see in §9.6 that the use of classifiers with borrowed verbs in MKK does not maintain the full 38-classifier system (which is more complex than that of either Gooniyandi or Jaminjung), but instead uses just four classifiers.

### 9.2.2 Polysynthetic verbs, borrowed roots and the fusion of the MP verb

There is rather less attestation of English/Kriol verbs being borrowed as *incorporated* verb roots, though this does occur in some northern Australian languages.<sup>131</sup> In Wagiman a single root *laikki* (< Kr. *laigim*) is attested:

(9.2.6) mahan maminakbun nga-**laikki**-ma-n gahan danganyin  
 good very.good 1s-**like**-ASP-PRES that food  
*this is very good, I like that food* (Wilson 2006:14)

But in Gunwinyguan languages numerous borrowed roots can be incorporated (Maia Ponsonnet, Nick Evans, *p.c.* 2014-02):

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<sup>131</sup> In a short note, Canfield (1980) also attests the incorporation of borrowed roots in Navajo.

(9.2.7) ya-h-**album**-hm-urrun-iyān

Dalabon 1DU.INCL-R-**help**-VBLZR-RR-FUT

*me and you will help each other* (Maia Ponsonnet, *p.c.* 2103-02-27)

In general, the incorporation of borrowed verbs into the MP synthetic verb does not occur, but there is a single attested case of such incorporation. This occurs with a borrowed root *tjigan* (< shake hands), which is used both as a coverb (ex. 9.2.8), and as an incorporated root, but only when compounded with the body part *-be* “arm” (9.2.9), in which case it is pronounced *-beyigan* due to PROGRESSIVE VOICELESS OBSTRUENT LENITION (§5.9.5.1):

(9.2.8) **tjigan** mam-nge=ngarrim

**shake.hands** 3S.DO(34)-3SF.IO=STAND(3).SER

*I'm shaking her hand* (Forshaw, 2013-12-06\_WF\_01\_V1)

(9.2.9) kanyi-ka ngay M\_\_\_\_\_

PROX-TOP 1S [NAME]

mem-ngintha-**be-tjigan**=ngarrim → /be'jigan/

3S.HANDS.RR(10)-DU.FEM-**arm-shake.hands**=STAND(3).SER

*that's me and M\_\_\_\_\_ shaking each others' hands*

(Forshaw, 2013-12-06\_WF\_02\_V1)

This example notwithstanding, it appears that the binding of MP classifiers and roots is too tight to allow the insertion of new roots. Most MP roots cannot be used as independent words, and this appears to render them psychologically opaque to native speakers (Rachel Nordlinger, *p.c.*). But furthermore, there are two phonological factors that tend to make the phonological form of a verb root opaque, and therefore make the unitary verbal word unsuitable for introducing new and unfamiliar roots:

- 1) Verb roots are subject to many morpho-phonological alternations, stimulated in particular by preceding classifiers (§5.9);

2) Verb roots do not always head their own metrical feet. Monosyllabic verb roots, especially, are liable to fall on an unstressed syllable (§5.10).

(9.2.10a) *ngi-mpa-rel-nu* → /ŋimpa.ɹelnu/  
1S.SIT(1).FUT-2S.IO-**sit**-FUT  
*he will sing for you* (Street, 2012: -rel)

(9.2.10b) *dim-rel* → /'diŋtel/  
3S.SIT(1).NFUT-**sing**  
*he sang* (Street, 2012: -rel)

These phonological processes do not affect all roots equally. For example, a disyllabic, /k/-initial root is phonologically transparent:

(9.2.11a) *dam-nga-kampa* → /,pirim'kampa/  
3S.POKE(19).NFUT-1S.IO-**laugh**  
*he laughed at me* (Street, 2012: -kampa)

(9.2.11b) *ngem-kampa* → /,piri'kampanu/  
3S.SIT(1).NFUT-**laugh**  
*I laughed* (Street, 2012: -kampa)

However, a large proportion of roots *are* affected by phonological processes that obscure their form, and this may well explain the empirical fact that we do not see new embedded roots being productively coined. Dalabon, by contrast, incorporates numerous borrowed roots, but has a phonological verb structure in which roots are more consistently transparent both in terms of stress and segmental form (Evans, Fletcher, and Ross 2008; Maia Ponsonnet, *p.c.*).

The opacity of the MP synthetic verb does not just affect borrowings: neither is there any attestation of new roots being incorporated from indigenous lexical sources (i.e. other word classes, ideophones). In short, the synthetic verb is not

productive for introducing new roots into the verb lexicon of MKK (though it may be productive in deriving new combinations of IBP + root, §8.4.4). But if MP resists the incorporation of new roots, how did *-beyigan* become embedded in synthetic verbs? One possible explanation for the incorporation of *-beyigan* is that this verb was borrowed at a time when the binding of classifiers and roots was less solid – that is to say, it was borrowed as an independent root, and became part of the synthetic verb along with the general historical synthesis of classifiers and roots (§8.2.1). This would imply both that *tjigan* is one of the oldest verbs to have been borrowed into MP (a thesis also supported by the fact that it has taken on a lexically specified morpho-phonological alternation), and that the fusion of classifiers and roots in MP is a historical process that was still ongoing after the first contact, direct or indirect, with English lexicon. Furthermore, the very impenetrability of the synthetic verb to new roots supports an argument that the synthetic verb is a fairly recent phenomenon. If we accept that MP, like all languages, must have its verbal lexicon slowly but continually refreshed, then to the extent that embedded roots are unanalysable, verbal neologism would have to take the form of coverbs. But as we have seen in §8.4.1, SMP as spoken by the Mission-raised generation had very few coverbs.

If the synthesis of classifiers and roots in MP really wasn't complete at the time when *tjigan* was borrowed, this would imply that fairly substantial word-structure changes occurred within about a 50-year period between sporadic or perhaps indirect early whitefella contact around the turn of the twentieth century (Walsh 2011), and the raising of the Mission generation from whom MP was first documented. But this is perhaps not unreasonable given the speed of similar changes documented in Ngan'gi (Reid 2003, see §8.2.1).

### **9.3 Syntactic precedents in “standard” Murrinh Patha**

Before going on to describe coverbs as evidenced in MKK, I will describe similar syntactic structures found in SMP. The documentation on these structures is fairly sparse, so detailed analysis is not possible – and in particular it is not clear

whether these should be described as a single class of uninflecting verbs, or as two separate classes, one being verbs and the other nominals.

In §8.4.1 I proposed a “marginal” role for coverbs in the SMP verb structure, listing just six attested roots that can be used in a CV + IV structure. To these we can add a further series of seven roots that are attested as nominals, but which are semantically verb-like in predicating actions. These are all either attested with nominal morphology, or in some cases simply listed in the dictionary as nouns (Street 2012), but without any examples revealing their syntactic combinatorics. The combination of nominal morphology and verb-like semantic function makes these words very similar to a minor Warlpiri word class that has been labelled “action nominals” (Simpson 1991:125–8). The evidence available for these roots does *not* show them combining with inflecting verbs to produce phrasal verbs; and conversely, the attested SMP coverbs are not attested combining with nominal morphology. Therefore these might be treated as two separate minor word classes in SMP; though on the other hand it may be that the sparseness of evidence on these roots has simply revealed some in the coverb role, and others in the nominal role, when in fact some or all of them can participate in both structures.

The full lists of coverbs and action nominals attested by Street (2012) are given, with examples, in Table 9.3.1. In MKK we will see that members of both sets are deployed in CV + IV phrasal verbs.

<i>Coverbs (see also §8.4.1)</i>	
batj	<b>batj</b> ma-ngka-nu <b>wait</b> 3S.DO(8).FUT-look-FUT <i>I'll wait for (it)</i> (Street 2012: -ngka)
wert	peneme-ka <b>wert</b> pirrim-ngka-neme 3PC.MASC-TOP <b>aghast</b> 3PL.STAND(3)-look-PAUC.MASC <i>they were aghast</i> (Street 2012: -ngka)
yerrarr	<b>yerrarr</b> ma-ngka-nu <b>survey</b> 3S.DO(8).FUT-look-FUT <i>I'll look around</i> (Street 2012: -ngka)
du	nukunu-ka <b>du</b> kanam-karrk 3S.TOP <b>cry</b> 3S.BE(4)-cry <i>he's continually crying</i> (Street 2012: du)

detj	ku mira <b>detj</b> ngamam ANIM lice <b>squash</b> 1S.DO(34) <i>I squashed the lice</i> (Street 2012: <i>detj</i> )
walalayingka	kardu bere-ngatha <b>walalayingka</b> parnamka-ngime PERS then-still <b>wave</b> 3PC.BE(4)-PC.MF <i>people are still waving</i> (Bunduck 1985:14)
<b>Action nominals</b>	
darrarart	ngankunime-ka ngarra da da=wangu nyini-ka 1PCF-TOP LOC PLACE PLACE=DIR ANAPH-TOP mi <b>darrarart-nu</b> <sup>132</sup> =warda VEG <b>stealing</b> -DAT=IMM <i>we would stay home to steal the food</i> (Nordlinger 2014: 3)
djekdjek	“ <b>play</b> ”, listed without examples in Street (1980: 2)
kampa	“ <b>laughter</b> ”, listed as noun in Street (2012)
kawurrk	piknik damatha ba- ngarra mayern <b>kawurrk</b> damatha ... <b>kawurrk-nu</b> picnic really no- LOC way <b>crossing</b> really ... <b>crossing</b> -DAT <i>for a picnic, no- (we were) crossing the creek... going across</i> (Blythe 2009-11-21)
kumkum	“ <b>swim</b> ”, listed as noun in Street (2012)
thudhutj	thuna-rdum ngarra kura ngipiliny <b>thudhutj-nu</b> 1INCL.FEET(7).PST-descend LOC WATER river <b>bathing</b> -DAT <i>we went down to the river to bathe</i> (WAVA 1997, Tape 1007)
wilili	pangu-warda-wangu ngunni-dha Daly River-nu there-IMM-DIR 1PL.FEET(7).PST-PST Daly River-DAT <i>we kept going to get to Daly River</i> <b>wilili-re</b> ,truck ma-nantji, <b>wilili-re</b> <b>walking</b> -PERL truck NEG-THING <b>walking</b> -PERL <i>(we were) walking, we didn't have a truck, we walked</i> (Nordlinger 2014: 5)

**Table 9.3.1 Uninflecting verb-like roots attested in SMP**

<sup>132</sup> The *-nu* suffix attached to these action nominal appears to be the dative marker described by Walsh (1976), but Nordlinger (2014) raises the question of whether it is in fact the homophonous future suffix. Further investigation will be required to resolve this question.



One or both of these types have probably served as what Heine and Kuteva call a “minor use pattern”, facilitating the emergence of phrasal verbs as a core syntactic structure in MKK (2005:41–48). In this theory, contact-induced grammatical change does not typically work by implanting new grammatical structures where they did not previously exist at all. Rather, such changes occur when a structure from the donor language can be mapped on to some *minor use pattern* in the recipient. This is a syntactic or pragmatic structure that is not part of the core, obligatory composition, but is rather more peripheral, and grammatically optional. An example they give is an effect that Paiute has had on the English spoken by Paiute Indians. The English discursive “they say”, a minor use pattern, is used as a form for copying evidential marking from Paiute. Paiute English speakers deploy this form much more frequently than other English speakers, and deploy it obligatorily to mark certain types of indirect evidentiality (p. 47). The analogous contact process in MP would involve the marginal CV + IV of SMP being used as a model onto which English uninflected verbs can be mapped. This results in the structure being used far more frequently, and indeed being obligatory for predicates where only a borrowed verb lexeme is available.

#### **9.4 Establishing coverbs as a word class**

While the coverbs and action nominals attested in SMP are minor classes with only a few lexemes attested, in MKK the CV + IV structure is frequent and has clear syntactic patterns. The IV already exists in the form of “simple” verbs with generic meanings (§8.3). It is the coverb that is the emergent word class. I here formulate the defining syntactic characteristics of the coverb, distinguishing it from two “suspect” word classes – nouns and adverbs – though for both there are ambivalent cases.<sup>133</sup> Similar class ambivalence, with the same forms

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<sup>133</sup> CV + IV structures are also somewhat similar to one type of nominal predicate described by Walsh (1996), which is obsolete in MKK (see §4.7.2). The nominal predicates that Walsh labels “vouns” are similar to CV + IV in that they have a root followed by an inflected light verb. However this older structure is much more restricted in that the root element is always an



noun “(sound of) weeping” (appearing with a noun classifier, which cannot be interpreted as anything other than the classifier of *du*).

(9.4.4) nukunu=ka **du** kanam-karrk  
 3s=TOP **weep** 3s.BE(4)-weep  
*he’s continually crying* (Street 2012: *du*)

(9.4.5) kardu wakal bina-na-yepup=ka **nantji du=ka**  
 PERS child 3s.16.PST-3s.IO-hear=TOP **THING weeping=TOP**  
 wurdini-rurturt nukunu=yu  
 3s.TURN(29).PST-find.RDP 3s=TAG  
*(Walawutkut) heard the crying of the children and found them*  
 (JL, 2013-06-22\_02)

But the “noun classifier test” is not determinate, because classifiers are not obligatory for nouns (Walsh 1997). It is more a matter that, if a word were indeed a noun, it would be likely to turn up with a classifier in *some* examples; and there is also the possibility that the same form could be used both as a nominal (optionally with a classifier), and as a coverb (never with classifier). Example 9.4.6 shows a borrowed form *rikoding* (< recording) that is well attested as a noun (i.e. with noun classifier), but in some instances such as 9.4.7 could be interpreted either as a noun without its classifier, or as a coverb:

(9.4.6) nantji rikoding ngarra=kama pumam-nga teip wakal  
**THING recording** what=INDEF 3.DO(8)-1s.IO tape small  
*they made a recording of me, maybe a little cassette*  
 (SL, 2012-06-12)

(9.4.7) **rikoding** ma-narra-nintha-nu  
**record** 1s.DO(8).IRR-2s.IO-DU.MASC-FUT  
*? I’ll record the two of you / ? I’ll make a recording of you two*  
 (DP, 2012-06-20\_25)

In quantitative terms, examples 9.4.8–9 show the inverse situation to *rikoding*. The word *sekul* (< circle) is multiply attested without nominal marking, seemingly as a coverb (9.4.8), but also appears in one instance as a noun phrase with the *-wan* marker that is used only for borrowed nominals<sup>135</sup> (9.4.9):

(9.4.8) **sekul** me=wurrini-dha  
**circle** 3S.DO(8)=GO(6).SER-PST  
*he was circling around* (WL, 2012-06-12)

(9.4.9) brik kangkarl kanyi=ngu brik  
brick.wall high PROX=DIR brick.wall  
nantji winda **sekul-wan**  
THING window **circle-NOM**  
*(in Berrimah prison) the brick wall is this high, with a circular window*  
(DP, 2011-09-01)

As discussed below, English morphology such as the *-ing* on *recording* is frozen in MKK borrowings, and cannot be taken as diagnostic of word class or inflectional category.

Adverbs are another MP word class for which the formal distinction from coverbs must be proven. Adverbs in MP are not strongly distinguished from adjectives, but rather can be identified as a subset of adjectival<sup>136</sup> forms that are

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<sup>135</sup> *-wan* is more often suffixed to borrowed adjectives, e.g. *ret-wan* “red”. In MP there is no clear syntactic distinction between nouns and adjectives (see next footnote), and the *-wan* suffix is borrowed from English’s “dummy noun” *one*, effectively an adjective nominaliser, to produce a syntactic unit that can serve as a noun (e.g. *nantji silba-wan* “the silver one”), though it is also used, unlike in English, for adjectival modifying functions (e.g. *nantji trak silba-wan* “the silver truck”).

<sup>136</sup> The question of a formal distinction between *nouns* and adjectives is complex, and will not be covered in this thesis. However one measure might be: inasmuch as the semantic combination with noun classifiers is transparent, the more a form might be regarded as an *adjective* rather than a noun. For example, *tjipmam* is clearly an adjective because the semantic connections are



Note that *thawatj* occurs with two very different verb classifiers and roots. It is not restricted in which classifiers or roots it can combine with (apart from semantic clashes – I presume that it cannot combine with *ngay-matha panngingkawerr* “I’m in a hurry” [DP, 2012-06-20\_25]), but rather modifies any semantically appropriate verbal predicate as an adjunct. Based on a single example it might be suspected that *wilili* is an adverb modifying manner of motion, perhaps roughly translatable as “on foot”. But a broader review of usage shows that it is restricted in the verb classifiers it combines with (only basic intransitives, which are typically used for Activity verbs), and the embedded verb roots it combines with (it is only attested combining “with itself” in the embedded form *-lili*, as we will see below). Coverbs differ from adverbs in that they cannot freely combine with a range of inflecting verbs.

In §9.6 below we will see that MKK coverbs have Aktionsart features that determine the classifier on the inflecting verb they combine with. Classifier selection is not within the remit of adverbs, which are adjuncts to a verbal head.

There are two positive syntactic features that typify coverbs, though they are not determinate tests for distinguishing the word class. The first is positional: coverbs occur directly to the left of an inflecting verb in the vast majority of instances (exceptions will be discussed below), whereas MP word order in general is very free. The second is alternation as embedded verb roots: in MKK the same indigenous forms can be found both embedded in inflecting verbs, and unbound in the coverb position, strongly suggesting that these are the same morpheme appearing in alternate syntactic positions. However this does not apply to borrowed coverbs, which are generally not embedded in inflecting verbs; and it does not apply to the small collection of indigenous coverbs attested in SMP (§8.4.1).

Occasionally we see evidence of verb roots shifting in or out of the inflecting verb in a sequence of utterances. For example, in an elicited verb conjugation of GO(6) + *-lili* “walk”, the root is embedded in an inflecting verb for singular forms, but when the speaker begins reciting non-singular forms and adds an extra verbal

morpheme *-ngkadhuk* to signal this,<sup>138</sup> it occupies the templatic slot where *-lili* was otherwise embedded, bumping it into the coverb position in the alternate form *wilili*:

(9.4.13) ngurru-**lili**-nu

1S.GO(6).IRR-walk-FUT

*I'll walk*

thurru-**lili**-nu

2S.GO(6).IRR-walk-FUT

*you'll walk*

**wilili** ngurra-ngkadhuk-nime

walk 1PC.GO(6).IRR-PL-PAUC.MASC

*we (paucal male) will walk* (KM, VPE)

In summary, coverbs can be identified as a distinct word class by the clustering of a series of properties, though there is no determinate test for individual examples. The characteristic features of coverbs are:

- (1) Usually appear immediately to the left of inflecting verbs;
- (2) In some cases alternately appear as embedded verb roots;
- (3) Do not take any noun classifier, or inflectional morphology (unlike nouns), though they can host enclitics;
- (4) Are restricted by Aktionsart in the verbs they can combine with (unlike adverbs).

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<sup>138</sup> *-ngkadhuk* is documented in SMP as a verb root, which Street (2012) glosses as “exist”. I have noted in my MKK data that it is used predominantly for plural, and occasionally paucal subjects, and to some extent functions like a plural marker. For example in various verb conjugations recorded with *kigay*, *-ngkadhuk* is added to all plural forms, but not at all to the singular forms (Appendix III).

## 9.5 The expansion of coverb lexicon and usage

Comparisons between MKK and SMP show that coverbs have grown quickly as a word class in recent decades, both in terms of token frequency in discourse, and in the range of coverb lexemes used. A review of natural discourse samples shows that phrasal verbs are very rare in SMP, while in MKK, though synthetic verbs remain more common, phrasal verbs make up a substantial minority of verb tokens, and show a range of lexemes comparable to that of incorporated verbal vocabulary.

Table 9.5.1 shows the token counts, and lexical type counts, for different verb structures used in MKK and SMP texts. The data is drawn from two MKK recordings and two SMP recordings chosen because they have similar mixtures of informal conversation and story-telling: one MKK session is a conversation between two kigay (WL and PP, 2012-06-02), another is a single kigay delivering a monologic narrative (KM, 2012-06-20\_28); one SMP session is a conversation between four elderly women (Blythe 2011-08-28), the other is two elderly men delivering a collaborative Dreaming narrative (WAVA 2000-11-10). Verbs are categorised into those with no lexical root (i.e. “simple”, classifier-only verbs), those with an incorporated root (always an indigenous MP root); those with an indigenous MP coverb; and those with a borrowed English/Kriol coverb:

<u>Rootless:</u>	wurran		= <i>he's going</i>
	3S.GO(6)		
<u>Inc. MP root:</u>	wurran-lili		= <i>he's walking</i>
	3S.GO(6)-walk		
<u>MP coverb:</u>	wilili	wurran	= <i>he's walking</i>
	walk	3S.GO(6)	
<u>Eng coverb:</u>	trening	kanam	= <i>he's training</i>
	train	3S.BE(4)	

For MKK, figures are given for three individual speakers, as well as a main figure aggregating their speech production. The aggregate proportions of the different



structures are also given, as well as counts of lexical types in the MKK data. For SMP, only aggregate figures are given for the six speakers, since there is no variation among them in terms of the structural verb categories documented here.

	<i>Rootless</i>	<i>Inc MP root</i>	<i>MP coverb</i>	<i>Eng/Kriol coverb</i>	<i>Total</i>
SMP	94 31%	213 69%	1 <b>0.3%</b>	0	308
MKK	77 24%	181 56% types = 62	16 <b>5%</b> types = 4	49 <b>15%</b> types = 26	323
<i>Individual MKK speakers</i>					
WL (age 18)	25 25%	48 48%	7 7%	19 19%	99
PtP (age 18)	23 26%	43 49%	0	22 25%	88
KM (age 23)	29 21%	90 66%	9 7%	8 6%	136

**Table 9.5.1 Verb structure types in MKK and SMP natural discourse samples**

The Table shows that coverbs appear in 20% of verb structures in MKK (5% indigenous MP coverbs and 15% English-borrowed coverbs), though if we set aside the simple verbs to look only at “complex” verbs with lexical roots, the figure is 26%. In an SMP sample of similar size, there is only a single coverb.<sup>139</sup> Among the 65 coverb tokens in the MKK data, one quarter are indigenous MP roots, and three quarters are English/Kriol borrowings. When we turn to the range of lexical types represented in these tokens, we see broadly similar type:token ratios in coverbs and incorporated verbs. The proportion of rootless “simple” verbs appearing in SMP and MKK is also fairly stable.<sup>140</sup>

<sup>139</sup> This is *mala*, a lexeme for which the meaning is obscure because it clearly involves a somewhat scandalous sexual act. It is found in a Dreaming narrative, where one protagonist makes forceful sexual advances on two others, *mala-warda dini-nku-malamala-dha* “then he did *mala* to the two of them” (WAVA 2000-11-10).

<sup>140</sup> Bill Forshaw made an independent count of 135 SMP verb tokens, of which a somewhat higher proportion, 39%, were rootless (*p.c.*, 2014-01-27).

In the rest of this section I focus on the range of the coverb lexicon, discussing sources and processes involved in its development.

### 9.5.1 Foreign and indigenous sources

As shown in the figures above, the majority of MKK coverbs are lexemes borrowed from English/Kriol verbs or verb phrases:

(9.5.1)	kardu	manangka	<b>tras</b> =nukun	mam-na=ya
	PERSON	NEG	<b>trust</b> =APPREH	3S.DO(34)-3S.IO=TAG
	<i>he didn't trust him</i>			(ED, 2011-09-17_03)

(9.5.2)	<b>meikit</b>	mam	ngamimarda=thu
	<b>make.it</b>	3S.DO(34)	other.side=HITHER
	<i>he made it all the way across</i>		(LP, VSE_2-6)

It is inevitable that MKK should borrow English/Kriol verbs, given the strength of cultural and technological forces compelling lexical borrowing in general (see §6.3); and as we saw in §9.2.2, in general borrowed roots cannot be inserted into the synthetic verb, so that phrasal verbs have become the vehicle for this diffusion.

A collection of 148 examples of borrowed coverbs is presented in Appendix X. This includes 85 distinct borrowed lexemes, of which *think* and *try* stand out as the most common.<sup>141</sup> The former may be motivated as providing a useful semantic distinction, since in SMP the verb classifier *mam* “say/do” (8/34) is used to mean “think” or “say” without distinction. There is less obvious motivation for borrowing *try*, since MP has indigenous means for expressing the

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<sup>141</sup> *Escape* and *record* are also very common in the sample, but these are accounted for respectively by various versions I elicited of the story of Nemarluk’s escape from Berrimah prison, and by the ever-present recording equipment.

concept.<sup>142</sup> Some of the borrowings are highly gratuitous in that MP has close indigenous equivalents (e.g. *fight, float, worry, hunt, fish*, see §6.2.1), though for these meanings kigay also use indigenous MP verbs, and indeed some of these English borrowings are only attested among younger kigay. Other verbs are clearly motivated by the cultural integration of new practices and technologies (e.g. *buy, sell, record*).

A rather smaller set of 15 indigenous lexemes, listed in Table 9.5.2, are also deployed as coverbs.<sup>143</sup> All are either identical, or clearly cognate, with incorporated verb roots. Most are also attested as independent words in SMP – especially as action nominals as described above (§9.3).

<i>Coverb form</i>	<i>Gloss</i>	<i>Incorporated root form (if distinct)</i>	<i>Combines with VC</i>	<i>Combines with root</i>	<i>Multiple attestation?</i>	<i>Independent word in SMP</i>
<i>bepurl</i>	clear away		GO(6)	none	Yes	-
<i>birl</i>	open eyes		DO(34)	none	No	<i>birlbirl</i> adj. “alert, watchful”
<i>thudhutj</i>	bathe	<i>-dhutj</i> ~ <i>-dhudhutj</i>	BE(4), GO(6), FEET(7), TURNRR(30)	self, none	Yes	action nominal
<i>tjedjek</i>	play	<i>-djegdjek</i>	STAND(3), BE(4)	self	Yes	? action nominal
<i>djungdjung</i>	kiss		none	none	Yes	-
<i>kabirrngka</i>	argue loudly	<i>-ngkabirr</i>	none	other	No	-
<i>kampa</i>	laugh		STAND(3), BE(4)	self, other	Yes	action nominal
<i>kawurrk</i>	cross river		DO.RR(10)		No	action nominal
<i>kumkum</i>	swim		none (non-finite)	none	No	action nominal
<i>wilili</i>	walk	<i>-lili</i>	BE(4), GO(6)	none, self	Yes	action nominal
<i>tharra</i>	run		SIT(1), BE(4)	none, other	Yes	imperative
<i>tjirrnga</i>	sneeze		DO(8/34)	none	Yes	-

<sup>142</sup> MP has a modal attemptative particle *-mani*, and also a verb stem *-thap* that can be used in the sense of “test” or “try”. But see Rumsey (2001) on some differences between English “try” and the semantically comparable modal particle in Ngarinyin, which is similar to the MP *-mani*.

<sup>143</sup> Two further coverbs are attested by Bill Forshaw in his recordings of children’s speech: *thurrpu* “splash” and *ngirrk* “blow nose” (Forshaw, *p.c.*) These are both listed as nouns in Street’s dictionary.

<i>walalayingka</i>	wave hands		STAND(3), BE(4)	none, self	Yes	coverb
<i>werrerr</i>	tremble		DO(8)	other	Yes	-
<i>puy</i>	keep moving	<i>-wuy</i>	GO(6)	none	Yes	imperative ( <i>puy!</i> )

**Table 9.5.2 MKK roots extracted as coverbs**

The “Combines with VC” column in the table gives the verb classifiers that have been attested in CV + IV combinations for that coverb. The “Combines with root” column indicates what verb root, if any, might be embedded in the IV: “none” (combines with rootless IV), “self” (the same root deployed as a coverb is repeated in the IV), and “other” (some other root appears in the IV). These should not be presumed to exhaust all possibilities, but only those that happen to occur in my data. The patterns of combination with verb classifiers and embedded roots will be discussed below.

There are two fairly strong patterns in the set of indigenous roots that are attested as coverbs in MKK: in their embedded forms they are mostly phonologically transparent; and they are mostly semantically transparent, in that they combine with various classifiers while maintaining a clear and constant semantic contribution (§8.3). This may be a coincidence, but it seems more likely to me that these factors have contributed to these roots maintaining independent word-hood.

I explained above (§9.2.2) that many MP verb roots are rendered phonologically opaque by morpho-phonological alternation and/or stress patterns. But alternations do not apply to embedded forms of any of the coverb roots except *wuy* (see below), and *-ngkabirr* ~ *-kabirr*. Further, almost all these roots form the head foot when embedded in verbs because they are either polysyllabic (*-bepurl*, *-djegdjek*, *-kampa*, *-kawurrk*, *-lili*, *-werrerr*, *-walalanyka*) or are monosyllables that usually occur in reduplicated form because they tend to encode continuous or pluractional events (*-birlbirl*, *-dhudhutj*, *-kumkum*, *-djungdjung*), which accordingly gives them a polysyllabic realisation likely to attract primary stress.



### 9.5.2 English/Kriol inflectional forms used in borrowings

Most borrowed coverbs use the English infinitive (zero suffix) form of the verb, as exemplified in 9.5.1 above. However, there are also some that use an *-ing* form:

(9.5.5) rikoding ma-narra-nintha-nu  
record 1S.DO(8).IRR-2S.IO-DU.MASC-FUT  
*I'll record the two of you* (DP, 2012-06-20\_25)

(9.5.6) Tjekitjen ekting mam=yu  
[NAME] act 3S.DO(34)=TAG  
*Jacky Chan acted in the film* (GM, VSE\_Intl)

The selection of gerund or infinitive as the borrowed form seems to be lexically specified. Those borrowings which have multiple attestations consistently use one form or the other; and there is no evidence that the *-ing* inflection carries its continuous aspectual marking over into MKK. *-ing* forms can appear in clauses with perfective aspect (9.5.6 above); and when they are involved in clauses with continuous aspect, the relevant MP morphology is applied:

(9.5.7) washing pillangam-mir|birl=**panam**  
wash 3PL.SURFACE(26)-shine.RDP=**IMPF**  
*they're washing it* (NP, PSE)

Various explanations are available as to why some verbs, but not others, are borrowed in *-ing* form. Firstly, for verbs such as *painting* and *recording*, the existence of a common nominalisation probably supports the identification of the *-ing* form as a salient word. Secondly, *hunting* and *fishing* are perhaps influenced by frequent usage in the phrasal constructions *go hunting* and *go fishing*. Thirdly, verbs such as *acting* and *killing time* are Activity verbs that may therefore appear most often in English with the *-ing* continuous marker. Meanwhile, among the larger set of verbs borrowed in infinitive form, we find

many Achievement verbs that might be used more often in perfective form:  
*understand, give up, share, crack.*

There are also a very few instances of English past perfective forms being borrowed as coverbs. In some instances this past perfective form is used to form a past perfective clause (ex.9.5.8–9), suggesting the possibility that its English grammatical marking is transferred into MKK. However the limited data available on this point does not show any consistent pattern – in particular, there are many past perfective verbs formed using unmarked English verb forms (ex.9.5.10) – so there is no evidence of English inflections playing a systematic role in the emergent phrasal verb grammar.

(9.5.8) **disapid** ngalla=matha mam-purra-nime (< *disappeared*)  
**disappear** total=EMPH 3S.DO(34)-3PC.IO-PAUC.MASC  
*he just totally disappeared from them* (KM, 2012-07-09)

(9.5.9) **memeri** ngay=ka **los**=warda ngamam (< *lost*)  
**memory** 1S=TOP **lose**=IMM 1S.DO(34)  
*now I've lost my memory* (DP, 2011-09-01)

(9.5.10) **lus** ngamam (< *lose*)  
**lose** 1S.DO(34)  
*I lost it* (DP, 2011-09-01)

There is also one case of an adjective (9.3.11) being borrowed as a coverb, and several cases of nouns being borrowed as coverbs (9.3.12–3). In the first two of these examples the borrowed words could alternatively be interpreted as maintaining their adjective and noun word classes respectively; however I prefer to interpret them as a coverbs because they fit the patterns of other coverbs very neatly. The first instance (9.5.11) replicates the general predicate + “do” pattern described in §9.6.1, while the second instance (9.5.12) replicates the pattern of paired simile roots, one incorporated and the other free, as described in §9.7.

- (9.5.11) **wedi** ngamam=ngem-ka tharra ngi-ku-nu  
**ready** 1S.DO(34)=SIT(1).SER run 1S.SIT(1)-run-FUT  
*I'm getting ready to run* (DM, PSE)
- (9.5.12) **diskou** panamka-murrk-ngime  
**non-trad.dance** 3PC.BE(4)-dance-PAUC.FEM  
*they're dancing (non-traditionally)* (PtP, PSE)
- (9.5.13) **snaipa**=matha wurrini-purra-nime-dha nawa  
**sniper**=INTS 3S.GO(6).PST-3PC.IO-PST RIGHT?  
*he snuck up on them, eh?* (PtP, 2012-06-02)

### 9.5.3 Kriol -im

A handful of borrowed coverbs are attested with /im/ final sequence indicating Kriol as the source rather than English. In Kriol *-im* functions as a transitivity marker (Sandefur 1991), but in MKK it is lexicalised as part of the borrowed forms. Most of these do appear in transitive or ditransitive clauses (9.5.14), but other coverbs can also participate in a transitive predicate without the *-im* suffix (9.5.15). Furthermore, there is an example in the corpus of a Kriol-derived *-im* verb being used in an intransitive clause (9.5.16)

- (9.5.14) mi **bayim** ma-nge-nu  
 VEG **buy** 1S.DO(34)-3S.F.IO-FUT  
*I'll buy ganja for her* (BP, 2012-07-15)



(9.5.15) tjelput      nimi=ka    marra      **krek**      **mam**  
house      one-TOP    new      **crack**      3S.DO(34)  
ku    nan-re                      kanamkek ngalla-re  
ANIM   can't.say-ERG      [NAME]      great-ERG  
*one new house, **he cracked it**, whats-his-name, by the great Kanamkek*  
(KM, 2012-06-20\_28)

(9.5.16) **tjiptim**      mam      ...      puy-matha      Kubuyirr  
**move**      3S.DO(34)    ...      continue-INTS    [PLACE.NAME]  
ba    pangu=kathu    wurrini=yu  
I.mean      DISTAL=HITH      3S.GO(6)PST=TAG  
*he moved on, he kept going to Kubuyirr, I mean to that place over there*  
(DM, 2012-07-15)

Further evidence that Kriol *-im* borrowings are morphologically fossilised can be seen in the use of *magim* “scratch, scar” as a nominal:

(9.5.16) magim      kandjin=kanam                      ngarra      mam-kakat  
mark      3s.have(22)=BE(4).SER      LOC      3S.DO(8)-cut.RDP  
*has he got a mark where he scratched him?*    (DP, 2011-09-01)

## 9.6 Combination with classifiers

CV + IVs can be divided in the first place into those which have a “simple” or light verb as an IV, and those which have a “complex” IV with its own root incorporated. The latter I label “double-rooted” constructions, and describe in the next section. The light-verb combinations always use a classifier that is already attested as a simple verb in SMP – i.e. classifiers that are only found in synthetic classifier + root combinations in SMP are not analysed and used independently in phrasal verbs (though there is one exceptional instance in the data, see below). The phrasal verbs combining with light verb can be subdivided into telic and atelic constructions, using different verb classifiers accordingly.

*Main types of CV + IV:*

Atelic	CV + basic intransitive classifier
Telic	CV + say/do classifier
Double-rooted	CV + any classifier + root (see §9.7)

We have seen in §8.3 that MP polysynthetic verbs can be coarsely categorised into those with basic intransitive classifiers, which are prototypically atelic and intransitive, and those using other classifiers, which are prototypically telic and transitive (ignoring the reflexive/reciprocal classifiers for the moment). Though both transitivity and telicity can be identified as properties of this loose semantic clustering of verb classifiers, we will see in Chapter 11 that it is telicity in particular that determines tense and aspect encoding (Nordlinger and Caudal 2012).

*9.6.1 Classifiers with borrowed coverbs*

The selection of verb classifiers for the IV element of borrowed CV + IVs is a simplified extension of the polysynthetic classifier system. A reduced set of basic intransitive classifiers, SIT(1), BE(4) and GO(6), are used to encode atelic verbs (“worry”, “clap”, “work”, “dance”), while DO(8) and DO(34), which are formally similar and probably in the process of merging into a single classifier, are generally used to encode telic verbs (“sink”, “buy”, “give up”). However we will see that there are some exceptions where DO(34) is used even for atelic verbs.

A collection of 148 borrowed CV + IV structures, using 85 different coverbs, were gathered from the MKK corpus to analyse classifier selection patterns. Of these a small minority (19 tokens) use basic intransitive classifiers, and these all encode atelic verbs, which are mostly also intransitive (exx 9.6.1–2), though there is also one transitive, for which the telicity is somewhat ambiguous (9.6.3).



(9.6.7) escape      **mam**  
 escape      **3s.DO(34)**  
*he escaped*      (PIP, 2011-09-01\_02)

However, among the “do” classified borrowings, there are also a minority of atelic, mostly intransitive verbs using this classifier (17 out of 129, i.e. 13%). These are produced by a range of speakers, and do not show any clear pattern distinguishing them from the atelic verbs that are classified using basic intransitives, though there are no instances where exactly the same verb complex is attested alternately with both basic intransitive and the “do” classifier. Therefore I do not analyse these as being functionally different from the atelic verbs classified using basic intransitive classifiers. Rather, I hypothesise that the telic/atelic classification system is simply a strong tendency, rather than an absolute rule. Perhaps it is a pattern that is still in the process of grammaticalisation from an earlier stage where only “do” was used in such structures (Nordlinger, *p.c.*). Examples 9.6.8–10 show some of the exceptional cases:

(9.6.8) kilingtaim    **nguyema=ngarni**  
 pass.time    **1PC.DO(34)-BE(4).SER**  
*we’ll pass some time*      (PP, 2011-09-01\_02)

(9.6.9) spataas      **ngiye-dha-nime**  
 taunt      **1PC.DO(34)-PST-PC.M**  
*we were taunting them*      (JL, 2013-06-22)

(9.6.10) ini    fil    **me**      dini-dha  
 ANAPH feel    **3s.DO(34).PST**    SIT(1).SER-PST  
*he could feel it*      (PP, 2011-09-01\_02)

Despite some “fuzziness” in the telic/atelic division, the data does fortunately include examples of the same coverb being used alternately in telic/atelic predicates, thus supporting the argument that this is a productive grammatical

distinction. *Think* (< think) has been borrowed in two slightly different senses, as an Activity “think about ...”, and as an Achievement “think that ...” (cf. Vendler 1957). Example 9.6.11 shows *think* used as an Activity verb (Durative, Atelic), selecting the typically intransitive and Atelic classifier SIT(1), and requiring the PST classifier form to encode past tense (§11.4). Example 9.6.12 shows *think* as an Achievement verb (Telic, Instantaneous), using the Telic “do” classifier, which accordingly can be encoded in the NFUT form for past tense.

(9.6.11) **think**      **ngini-dha**                      ngarra      Tjon  
                  **think**      **1S.SIT(1).PST-PST**              about      John  
                  *I was thinking about John*    (KM, 2012-06-20\_25)

(9.6.12) *kardu*<sup>145</sup>      **think**      **ngamam**  
                  HUMAN      **think**      **1S.DO(34).NFUT**  
                  mabal                      me-na-dha                                      na      tiduk-re  
                  mobile.phone      1S.DO(34).PST-3S.IO-PST              TAG      behind-PERL  
                  *I thought, “I should have recorded him from behind”*(DP, 2012-07-16)

There are also alternate uses of *wurk* (< work), though the telicity distinction is not as clear. This has several attestations as an atelic activity, using basic intransitive classifiers as expected (ex. 9.4.13). But there is also a single attestation with the “do” classifier, in which instance it combines with the “attemptative” particle *mani* (§11.7), yielding a more bounded predicate that may well be considered telic (9.6.14):

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<sup>145</sup> The role of *kardu* “person” in this sentence is not altogether clear, but I suspect that it is an idiomatic way of saying “I”.

(9.6.13) wurlk kanam  
 work 3S.BE(4)  
*he's working*

(AlxL, PSE)

(9.6.14) wurlk ngiyema-nu=mani  
 work 1PC.DO(34)-FUT=ATTEMPT

*we'll try working / have a go at working* (DP, 2011-09-01\_01)

An interesting element of the emergent bipartite classifier system – VC1/4/6 TELIC vs VC34 ATELIC – is that this takes a grammatical structure that is *covert* in the older synthetic structures, and maps it onto an *overt* morphological distinction. That is to say, in polysynthetic verbs it is telicity that determines the tense reading of NFUT forms (§11.4), though this telicity is not a morphological feature, but a covert category only revealed in tense readings. However inasmuch as the new phrasal verbs are evolving a telic/atelic classifier rule, the telicity feature is now overtly marked. The overt classifier forms that have been used for this function are of course not randomly refunctionalised, but rather have fallen naturally into this role because there is a strong tendency in synthetic verbs for the basic intransitives to classify atelic verbs, while the others classify telic verbs – though this is not a categorical rule (§8.3).

There is one rather exceptional instance of a coverb combining with a classifier that is *not* attested as a simple verb. In example 9.6.15 the coverb *kuki* “cook” is combined with classifier HEAT(27) and no root in the main verb. HEAT(27) is not permissible as a rootless (simple) verb in SMP, for which the equivalent clause with embedded verb is illustrated in example 9.6.16.

(9.6.15) ngay=ka kuki **ngina**-nu  
 1S=TOP cook 1S.HEAT(27).IRR-FUT  
*I'll cook it* (DP, 2011-09-01)

(9.6.16) ngay **ngina-tji**-nu  
 1s 1s.**HEAT(27)**.IRR-**cook**-FUT  
*I'll cook it* (JL, PSE)

This shows a verb classifier in the main verb “classifying” the coverb in a much more semantically specific manner than is found with the rest of the examples, where classification seems largely limited to Telic vs Atelic. However there is just a single example of this type of phrasal verb in my data.

### 9.6.2 Classifiers with indigenous coverbs

Because the classifiers applied to coverbs follow the same principles as MP verbs in general, most of the indigenous coverbs combine with a classifier for which they are already attested in Street (2012) in their embedded forms. Others are paired with classifiers that fit quite naturally with them in terms of semantics and telicity:

(9.6.17) puy **wurran**-nintha=dim  
 continue 3s.**GO(6)**-DU.MASC=SIT(1).SER  
*the two of them are continuing on* (AnB, VSE\_3-6)

*Birl* and *kawurrk* combine with classifiers with which they are otherwise unattested, but these combinations show productive use of the telic/atelic classifier pattern with coverbs. *Birl* is attested by Street (2012) as either an Activity (in reduplicated form, *birlbirl*) meaning “to keep watch” and using basic intransitive classifiers, or an Achievement “to turn one’s head around to look”, in which case it is encoded with the reflexive “do” (VC10). The example attested for *birl* as an MKK coverb is Telic and not reflexive, so the “do” classifier fits well with the principles of classifier Aktionsart and valency:





(9.6.20) ngam-thawi-djung  
 1s.mouth(19)-lip-kiss  
*I kissed (his/her) lips* (Street 2012: -djung)

(9.6.21) \*thawi-djung mam  
 lip-kiss 1s.do(34)  
*I kissed (his/her) lips*

The two features that are generally taken as the defining characteristics of a polysynthetic language are noun incorporation, and the marking of all clause arguments on the verb (Baker 1996; Evans and Sasse 2002). Though noun incorporation does not occur in MKK phrasal verbs, the marking of verbal arguments does, though this marking is not identical to MP synthetic argument marking. The IVs used in phrasal verbs are always syntactically intransitive, and use the “indirect object” pronominal series (§8.4.2) to mark patients or stimuli (exx. 9.6.22–3), which are marked as direct objects of transitive synthetic verbs. The same pronominal series marks recipients, beneficiaries and other oblique roles that are also marked as indirect objects on synthetic verbs (9.6.24):

	<i>Synthetic verbs</i>	<i>Phrasal verbs</i>
<i>Patient, stimulus</i>	direct object	indirect object
<i>Recipient, beneficiary etc</i>	indirect object	

(9.6.22) distroy karda-ya mam-**purra**-nime  
 destroy PROX-TAG 3S.DO(34)-**3PL.IO**-PAUC.MASC  
*he destroyed them here* (PIP, 2011-09-01\_02)

(9.6.23) manangka andasten ma-**narra**-nintha=ngi  
 NEG understand 3S.DO(34).IRR-**2PL.IO**-DU.MASC=SIT(1).SER  
*I don't understand you two* (DM, 2012-06-02)

(9.6.24) mi bayim ma-**nge**-nu  
 VEG buy 1S.DO(34)-**3SF.IO-FUT**  
*I'll buy ganja for her* (BM, 2012-07-15)

## 9.7 Double-rooted constructions

A few CV + IVs have two verb roots, one as a coverb and one incorporated in the inflecting verb. These are of two types:

- (1) The coverb is a copy of the incorporated verb root, or is a synonym of the verb root.
- (2) The coverb contributes a separate semantic element, encoding an action that is caused by, prevented by, or otherwise associated with the action predicated in the inflecting verb. These produce complex predicates.

Within the first category we can distinguish three subtypes:

Firstly, those in which the same verb root appears twice. This configuration is only available where indigenous coverbs are used, since borrowed coverbs cannot be integrated into the polysynthetic verb:

(9.7.1) **tjedjek** panam-**djegdjek**  
**play** 3PL.BE(4)-**play**  
*they're playing* (AdB, PSE)

(9.7.2) nantji **walalanyka** kanam-**walalanyka**  
 THING **wave** 3S.BE(4)-**wave**  
*he's waving something* (CP, 2011-09-09\_2-11)<sup>147</sup>

Secondly, where two synonymous MP roots are used. I have only encountered one instance of this configuration:

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<sup>147</sup> This example is not MKK, but rather spoken by a woman in her 50s, of Marri Ngarr / Murriny Kura heritage.

(9.7.3) thangkunu thurdan-**ralal**=ya                    **kampa**  
 why                    2S.TURN.RR(30)-**laugh**=TAG   **laugh**  
*why are you laughing?*                    (AM, PSE)

Thirdly, a borrowed coverb with a synonymous indigenous root embedded:

(9.7.4) **pitjin** thani-**ku**                    burrk                    damatha=ya  
**fish**   2S.BE(4)-IRR-**fish**                    great                    EMPH=TAG  
*you could go fishing, it would be great*   (PtP, 2012-06-02)

(9.7.5) **dentjing**   panam-**murrk**  
**dance**                    3PL.BE(4)-**dance**  
*they're dancing*                    (AIB, PSE)

(9.7.6) **washing**   pillangam-**birl-birl**=panam  
**wash**                    3PL.SURFACE(26)-**shine**-RDP=BE(4).SER  
*they're washing it*                    (NP, PSE)

We now turn to the complex predicates, in which the two verb roots contribute distinct semantic elements. In examples 9.7.8–10 both roots index the same subject, and each contributes some semantic element to a complex action:

(9.7.8) **anting** parnam-ka-**wat**-nime                    ngamimarda=yu  
**hunt**   3PC.BE(4)-PAUC-**go.habitually**-PC.MASC   other.side=TAG  
*they go hunting over the other side all the time* (Patrick, 2012-06-02)

(9.7.9) **klep**   panam-**djegdjek**  
**clap**                    3PL.BE(4)-**play**  
*they're clapping (as a game)*                    (AnB, PSE)

(9.7.10) Nicky **kampa** na-**dhap**-de  
 Nicky **laugh** 2S.DO(8).IRR-**shut**-ITER  
*Nicky, stop laughing!* (MAK, 2013-07-11)

In two further examples, the coverb encodes an action that results from the action on the main verb. These have distinct actors, such that the patient of the inflecting verb predicate is the agent or experiencer of the coverb predicate:

(9.7.11) **werrerr** mam-na-**rithuk**  
**tremble** 3S.DO(8)-3S.IO-**scare**  
*(the crocodile)'s making him tremble with fear* (JL, PSE)

(9.7.12) i **elp**=ngatha ma-rra-nintha<sup>148</sup>-**art**-nu=ka ngarra...  
 and **help**=if 1S.GRAB(9)-3DU.IO-DU.MASC-**get**-FUT=TOP LOC  
*and if I get those two to help with...* (SL, 2012-06-12)

In double-rooted constructions that form complex predicates, the word class of the independent roots becomes more ambiguous, because they do not restrict their classifier combinations in the same way as for simple predicates. For example *kampa* “laugh” is restricted to basic intransitive classifiers when it partakes in the simple Activity predicate LAUGH. But in the complex predicate STOP LAUGHING, as in example 9.7.10 above, it combines with a Telic “do” classifier, and a second verb root. In this instance it could also be interpreted as “laughter”, a noun object of the inflecting verb.

There is also one example of a clause where two borrowed roots, both of which elsewhere appear as clear coverbs, appear together in sequence (9.7.13). In this instance these might be analysed as either two consecutive coverbs combining into a complex predicate, or as a verb “start” and a noun object “work”. But note

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<sup>148</sup> The position of this object number marker does not fit previous MP grammatical descriptions, see §10.6

that the word order is the opposite of the English “start work”, indicating that the combination has not been borrowed as a phrasal unit.

- (9.7.13) seven eight      **wurlk**    **start**      pama-nu=yu  
 seven eight      **work**    **start**      1INCL.DO(34)-FUT=TAG  
*we'll start work at seven or eight*      (SL, 2012-06-12)

### 9.8 Coverbs as non-finite verbs

The detachment of verb roots from the inflecting polysynthetic verb facilitates the formation of non-finite clauses – i.e coverbs without accompanying inflecting verbs. This occurs in SMP with an action nominal (Nordlinger 2014; see §9.3.1). When non-finite coverbs occur in the MKK data, the subject and TAM categories of the verb can generally be recovered from discourse context:

- (9.8.1) kardu fait    purne-nime-dha      pana=ya    ...  
 PERS    fight    3S.GO(6)-PC.MASC-PST    ANAPH=TAG ...  
**fait**    ngarra      pitjimen  
**fight**    LOC          bitumen  
*people were fighting there .... (they were) fighting on the bitumen*  
 (ED, 2011-09-17\_03)

- (9.8.2) think      ngamam    aa    bere nakurl-lu    ...  
 think      3S.DO(34)    ah    then later-FUT    ...  
**gibap**      dangatha    burrburr  
**give.up**    already      cold  
*I thought “okay, next time”, (I) gave up from cold*    (LP, 2012-06-30)

In a few instances the subject is specified by a free pronoun, showing both SV and VS word order. In some of these instances the TAM is unspecified in the sense that the predicate is temporally generic (9.8.3–4, see also §11.6), while in

some the TAM is unmarked, but follows from the timeframe and aspect established in the discourse (9.8.5):

(9.8.3) ninyi<sup>149</sup> na        **kumkumkumkum**=matha  
you    RIGHT?    **swim.RDP**=EMPH  
...                kurru-mpa=matha  
[PAUSE]        3s.go(6).IRR-2S.IO=EMPH  
*you're swimming along and it will just come right up to you*  
(KM, 2012-07-09)

(9.8.4) kanyi=thu        **wili**        ngankungime  
PROX=HITH        **walk**        1PC.FEM  
kanyi=ngu kanyi=ngu rut kanyi=da  
PROX=DIR    PROX=DIR    road PROX=PLACE  
*we (my family) walk this way, on this road here* (ED, 2011-09-17\_03)

(9.8.5) kuk    **rash** German    nimi-de    pliska    tharra  
still    **rush** [NAME]    one-ITER    police.car run  
rash ngumam-ka-nime=matha tharra  
rush 1PC.DO(8)-PC-PC.M=EMPH run  
*the German mob still rushed down again, the police car came, we rushed off really fast*  
(ED, 2011-09-17\_03)

There is also a single instance in the corpus where an English/Kriol pronoun is used to specify the subject of an otherwise non-finite verb (9.8.6). This is highly unusual in that it shows English being borrowed for the inflectional, rather than just lexical, dimensions of a clause. This might be regarded as a case of code

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<sup>149</sup> The second-singular pronoun is *ninyi* in SMP, but in MKK more frequently *ninyi* (I am indebted to Joe Blythe for first pointing this out to me). This may reflect the influence of Marri language forms, which are *niny* (Marri Ngarr, Magati Ke) and *nany* (Marri Tjevin, Marri Amu). Between this shift in place-of-articulation, and initial lenition effects on other *ny-* words (§4.7.5), the palatal nasal has in fact ceased to occur in word-initial positions in MKK.

switching, or even incipient creolisation, though for the moment such phenomena are very rare in MKK (see §4.7.4 for related examples):

- (9.8.6) **yu think=ka** manangka ki-dha Belyuen=yu  
**you think=TOP** NEG 3S.SIT(1).IRR-PST [PLACE]=TAG  
*you realise, he didn't stay at Belyuen* (PIP, 2011-09-01)

The other possibility for non-finite coverb clauses is in subordination. In 9.8.7–8 the non-finite *djungdjung* “kiss” and *thudhutj* “bathe” are used in subordinate clauses for which the subjects are controlled by the objects of the main clauses.

- (9.8.7) ngay bam-nku-ngkardu-ngintha djungdjung  
 1s 1s.13-3DU.DO-see-DU.FEM kiss  
*I saw the two of them kissing* (KM, FN\_2013-11-24)

- (9.8.8) ngay bangam-pun-ngkardu paba ngay thudhutj  
 1s 1s.14-3PL.DO-see brother 1s swim  
*I saw my brothers swimming* (LP, FN\_2013-11-28)

However, it must be noted that there are only a few examples of this in the natural speech corpus, and the only really clear examples (such as those above) have been obtained through English-based elicitation.

Non-finite subordinate clauses are unattested in SMP, where complex clauses are instead expressed mostly by parataxis, or occasionally with a complementiser *ngarra*. Non-finite subordination in MKK might be hypothesised to be influenced by English/Kriol or other Aboriginal languages such as Jaminjung, both of which have non-finite subordinates (Schultze-Berndt 2003:153). Further research would be required to establish the outlines of variation in MKK between finite and non-finite subordinate clauses. This might also be used as an elicitation frame to discover which roots can or cannot be deployed as coverbs, confirming or disconfirming the phonological transparency hypothesis (§9.5.1).

## 9.9 Syntax of coverbs

The usual syntactic location for coverbs is immediately before the inflecting verb, as seen in most of the examples above. This is the most common order globally for “coverb + do” verb borrowing (Myers-Scotton 2002:137); and is also by far the more common order among northern Australian languages that have comparable structures (§9.2). But there are also a small minority of instances where the coverb immediately follows the main verb (see also 9.5.14 above):

(9.9.1) aa kanyi=ngu-mini      purru-nime      wili  
ah PROX=DIR-TRY      1INCL-PC.MASC      walk  
*ah, we'll try to walk out that way*      (PtP, 2012-06-02)

(9.9.2) kiyema-nu      wurlk  
3S.DO(34).IRR-FUT      work  
*he'll work*      (SL, 2012-06-12)

(9.9.3) ku=ka      kanyi=matha      puma      seib  
ANIM=TOP      PROX-EMPH      1INCL.DO(8).IRR      save  
*we'll save this money*      (PIP, 2011-09-01)

The other departure from the typical syntax is the intervention of words or clitics between coverb and main verb. Examples have been found with the intervening position occupied by the subject pronoun (ex. 9.9.4), a locative adjunct (9.9.5), adverbial enclitics (9.9.6) and adverbial phrases (9.9.7–9).

(9.9.4) kampa      **penime=yu**      pibimka-kampa-nime  
laugh      **3PC.MASC=TAG**      3PC.STAND(3)-laugh-PC.MASC  
*they're laughing*      (JL, PSE)



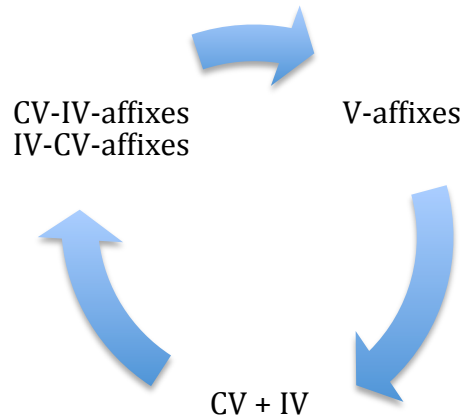
- (9.9.5) res **dji=ngu** pumena-dha-nime  
rest DISTAL=DIR 3PC.DO(34).PST-PST-PC.MASC  
*they were resting there* (BrP, 2012-06-30)
- (9.9.6) count=**warda** ngamam  
count=IMM 1S.DO(34)  
*I'm counting them now* (DP, 2012-09-01a)
- (9.9.7) wilili **wanmen naf damatha** ngirra-lili  
walk alone enough only 1S.STAND(3).IRR-walk  
*I can just walk around on my own* (ED, 2011-09-17\_03)
- (9.9.8) disapid **ngalla=matha** mam-purra-nime  
disappear intense=EMPH 3S.DO(34)-3PL.IO-PC.MASC  
*he just totally disappeared from them* (KM, 2012-07-09)
- (9.9.9) rikodim **live** ma-ngarru-nu-nime  
record live 3S.DO(34).IRR-1PC.IO-FUT-PC.MASC  
*he'll record us live* (CN, Blythe\_2010-08-27)

In the next chapter (§10.8) I interpret the syntax of CV + IV structures in relation to the morphosyntax of polysynthetic verbs.

## 9.10 The phrasal/synthetic historical cycle, and language contact

In this chapter I have proposed a speculative hypothesis that the classifier and root of the MP synthetic verb may have fused together in the quite recent past (§9.2.2). I have also shown much more concrete evidence that in the last generation or two, phrasal verbs have become considerably more common. Both types of restructuring are relevant to a theory posited by both Dixon (2002:197–200) and Schultze-Berndt (2003:146–7) that languages of northern Australia move through a historical cycle of phrasal and synthetic verbs. In one phase of

the cycle, CV + IV phrases become fused into single words; in the other phase new coverbs are introduced and the erstwhile synthetic verb is re-analysed as simplex:



**Figure 9.10.1 Simple model of the phrasal/synthetic diachronic cycle (Dixon 2002; Schultze-Berndt 2003)**

This phrasal/synthetic verb cycle is posited as an essentially language-internal process driven by phonological erosion and grammaticalisation; but in the recent developments in MP, language contact has clearly also played a role. This is most obvious in terms of lexical borrowing, which has driven the emergence of the phrasal structure in MKK. But contact and bilingualism with other Aboriginal languages may have played an additional role. We saw in §9.2.1 above that CV + IV structures have been used to facilitate verb borrowing in other languages of north-western Australia – languages where perhaps this was even more inevitable, given that CV + IV was already the main verb structure. The extent of such borrowing is not well known, but has been documented at least for Jaminjung (Schultze-Berndt 2007), which is one of the languages with which MP have been in contact, and for which I have noted some evidence of multilingualism among the older generation at Wadeye (§4.3).

On another front, it may be that the CV + IV structures in neighbouring languages may have had a morphosyntactic influence on MP quite apart from English/Kriol

borrowings – though I consider this hypothesis less plausible. Though Marri languages typically incorporate verb roots, they do also exhibit “excorporation” of the same type described for Gunwinyguan. For example in Marrithiyel (Green 1989:316):

(9.10.1) nanggana-na, ma-meri **guninj-lerri-ya** mitjin-nanga  
MTh before-first MASC-man **3PL.GO-be.happy-PST** mission-LOC  
*or*  
nanggana-na, ma-meri **lerri guninj-a** mitjin-nanga  
before-first MASC-man **be.happy 3PL.GO-PST** mission-LOC  
*back then, the men used to be happy at the mission*

However, though contact with Marri languages is very extensive, the coverb structure there is a peripheral alternative, rather than a core verbal structure. Therefore it does not seem a likely candidate for grammatical transfer through bilingualism. Conversely, though Jaminjung has CV + IV as its core verbal structure, it is doubtful that MP/Jaminjung contact has been sufficient for this sort of grammatical influence. The effect of Jaminjung *borrowed* CV + IV structures may have dovetailed with direct English/Kriol contact to stimulate the MP CV + IV structure.

### 9.11 Summary

In this chapter we have seen that MKK uses phrasal verbs as a major verbal structure, where in SMP this was quite marginal. The coverb class is mostly populated by verb roots borrowed from English/Kriol, though it also uses indigenous verb roots that alternately occur embedded in the synthetic verb.

MKK coverbs maintain the covert Aktionsart categories that are deployed in the standard MP syntax/semantics interface, and which will be further described in Chapter 11. But in terms of morpho-phonological structure they represent a shift along the scale from a more synthetic to a more analytic clause, both because the

classifier and root are independent, and because noun incorporation does not apply. The rise of phrasal verbs in MKK shows that lexical borrowing is not always a “superficial” contact effect. Especially when languages in contact are very typologically distinct, and do not have similar word structures, the diffusion of one language’s vocabulary into the other can have grammatical consequences.

## **Morphosyntactic change and variation in the polysynthetic verb**

### **10.1 Introduction**

Synchronically the MP verb has a *templatic* structure, meaning that rather than building up morphemic structure layer-on-layer around a stem, as in most languages, there is instead a semantically arbitrary array of sequential positions – a template – in which morphemes appear (Nordlinger 2010a). However, when viewed through the lens of change and variation, attending to differences attested at different points in time, between different speakers recorded at the same time, and even in the speech of the same speaker, the model of rigid, arbitrarily specified sequencing rules becomes problematic. The morphosyntactic structure of the MP verb proves to be quite dynamic, inviting us to seek explanations as to why certain sequences become obsolete and why new sequences take their place.

In this chapter I describe the sequencing of verbal morphemes in Murriny Karlu Kigay (MKK), showing that this is highly variable both among speakers and within the speech of the same speaker. I interpret this variation as exhibiting grammatical changes in progress, and argue that the changes exhibited can to a large extent be explained in terms of semantic relevance. This is not to say that the verb does not have templatic structure – indeed none of the various sequences attested in my data can be entirely explained in terms of semantic layering. But a fuller view of the verb must recognise that these sequences are transition points in unfolding changes (Nordlinger 2010a:337–8). One such change has already been described by Blythe (2010; 2013), who uses a combination of diachronic reconstruction and synchronic interactional analysis

to show that dual number markers have been reanalysed from object pronominals, and in the process developed a fixed, semantically arbitrary morphosyntactic position.

The MP verb is built around not one but two syntactic units, the classifier and the stem (§8.3). Though these are phonologically bound into a single polysynthetic word, they have clearly been two separate words in the past, and in the rise of CV + IV structures in MKK are again opening up possibilities for syntactic independence (§8.2.1, §9.2.2). I will argue that the changes underway, even those attested in the fused polysynthetic verb, can be better motivated by a two-unit syntactic analysis than by viewing the polysynthetic verb as a single block.

## 10.2 Variable morpheme ordering

Variability of affix ordering is not a widely reported phenomenon – perhaps because it is more likely to occur in highly synthetic languages that have more affixes to re-order, and change and variation is very little documented in such languages. There is some evidence of variable morpheme order in older MP data – in particular, the older speakers recorded by Blythe (2005) use more diverse sequences to the right of the verb classifier (slots 2–3) than do the slightly younger speakers recorded by Nordlinger (2010); only the older speakers ever use a subject number suffix on the serial verb; and both Blythe and Nordlinger report variable ordering of adverb and argument number to the right of the verb root (slots 7–8, see §8.2). But this evidence has not been discussed as variation *per se*, but rather has been modelled by positing more complex templates with optional slots.

Perhaps the best-documented case of variable affix ordering is that of Chintang (Tibeto-Burman, Nepal), as reported by Bickel et al (2007).<sup>150</sup> Chintang uses a

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<sup>150</sup> I am also aware of one reported case of variable suffix ordering in an Australian language (Nhanda, Pama Nyungan (Blevins 2001:118–120)), however this is quite sparsely documented. There are other cases of polysynthetic languages where flexible morphemic ordering is attested,

range of prefixes that cannot be separated from the verb and are obligatory inflectional morphology; they cannot be a word-like locus of metrical stress, but in some other phonological diagnostics they show independence from the verbal word domain. Like SMP suffixes (§8.5.2), the Chintang prefixes can be separated from the verb stem by an intervening endoclititic (cf. Harris 2002). Bickel et al report that these prefixes can be ordered in any of the logically possible sequences, which at a maximum of 4 morphemes before the core verb root, gives 24 possible sequences.

Two elements of the Chintang prefixes are mirrored in MP suffixes: (a) they are not altogether phonologically integrated into the verb, and (b) their syntactic connection to the verb can be broken by an endoclititic. However, in MKK the endoclititic adverbial is no longer used (§10.4.1), and I view the variability of suffix ordering not simply as “free variation”, but as a symptom of change in progress. The variability of ordering in Chintang might also be better understood if data were available showing whether this situation has been stable across generations of speakers, and to what extent individual speakers differ in the sequences they use.

### **10.3 Change and variation to the right of the verb root**

My MKK corpus includes quite extensive data exhibiting change and variation in morpheme sequencing to the right of the verb root. I will argue in section §10.7 that the changes exhibited can be explained in terms of semantic relevance and functional load, but I here focus on describing the empirical evidence.

The SMP template is shown in Figure 10.3.1 with the area in question highlighted:

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but rather than being “free variation” (i.e. without consequences for meaning), it is used to subtly change meanings by rearranging semantic scope – e.g. Athapaskan (Rice 2000), Adyghe (Korotkova and Lander 2010).

<i>Coverb</i> †	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	<i>Serial verb</i>
Verb root	<b>Classifier stem</b> (with fused subject) pers/num and TAM)	Object pron, Subj number, Reflexive/ reciprocal	Incorporated body part, Applicative	<b>Verb root</b>	Tense (TNS)	Argument number (NUM), Adverbial (ADV)			Classifier stem (> IMPF)

Figure 10.3.1 The SMP verb template († marginal)

The changes observed in this sequence are:

- (1) Incorporated ADV is no longer found;
- (2) The ordering of morphemes is variable;
- (3) All morphemes are to some extent optional, but especially TNS;
- (4) The serial verb shows signs of evolving into an imperfective affix (IMPF).

I will argue that the variability of sequences shows the verb reconfiguring into the following structure:

<i>Coverb</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Verb root	<b>Classifier stem</b> (with fused subject) pers/num and TAM)	Subj number	Object pron, Reflex./ recip.	Incorporated body part, Applicative	<b>Verb root</b>	NUM	Imperf. (IMPF)	TNS

Figure 10.3.2 Projected structure towards which MKK verb is moving

### 10.3.1 Obsolescence of adverbial endoclitics

As we saw in §8.4.7, SMP can insert ADV as an “endoclititic” inside the verb template, fulfilling a range of temporal/aspectual and spatial functions:



(10.3.1) kanyi-kathu kura pantje-dha-tharra ...  
 PROX=HITH WATER 3DU.SIB.HAVE(22)-PST-MOVING ...  
 ngarra thardi-dha-**kathu**-ngime  
 LOC 1INCL.BE(4).PST-PST-**HITHER**-PC.FEM  
 {CLASF-TNS-**ADV**-NUM}  
*the two siblings were bringing drinks this way ... towards where we  
 were camping* (Blythe 2009, cited Nordlinger 2010: 327)

(10.3.2) puddan-punku-rlarl-**deyida**-ngime=pumpan-ka  
 3DU.SIB.TURN(29)-3PC.DO-drop.off-**ITER**-PAUC.MF=GO(6).SER-PAUC  
 {CLASF-OBJ-ROOT-**ADV**-NUM=CLASF-NUM}  
*the two siblings are dropping them off, one after the other, as they go  
 along* (Blythe 2009: 134)

The list of attested ADV endoclitics is given in Table 10.3.1.

<i>Adverbial</i>	Meaning	Gloss	Examples
-warda	“imminent”, either just happened or about to happen	IMM	8.4.6
-tharra	moving	MOVING	-
-kathu	oriented towards speaker (or some other reference point)	HITHER, DEMAND	8.4.7
-wangu	moving in the direction of some specified point	DIR	8.4.17
-deyida	“again”, “still”, “also”; iterative action	ITER	5.8.1

Table 10.3.1 Adverbial particles

The position of ADV in SMP can be quite anomalous in terms of scope and syntax. In the two endoclitic examples above, for 10.3.2 the position of *-deyida* ITER is quite natural, as an Aktionsart modifier that specifies an iterative quality for the adjacent verb root DROP OFF. But in 10.3.1 the directional *-kathu* modifies the allative preposition *ngarra*, which relativises the verb “we were camping” within

which *-kathu* is embedded – semantically it operates on this relativised verb as a whole, but morphosyntactically it is embedded in the middle of it.

In MKK ADV attaches to the verb only as an *enclitic*, and never as an *endoclititic*.<sup>151</sup> ADV attaches to the right edge of the verb just as it attaches to the right edge of other constituents, so there is no reason to treat it as part of the inflecting verb:

(10.3.3) puni-winhart-nu=**warda**

3S.FEET(7).IRR-run-FUT=**IMM**

*he's going to run*

(KN, PSE)

(10.3.4) ngay=ka kura=**warda** ba-gurduk-nu

1s=TOP WATER=**IMM** 1s.13-drink-FUT

*I'll drink some water (now)*

(AnB, PSE)

In fact the only common adverbial attachment to verbs in MKK is the “imminent” =*warda*, which specifies that something is *about* to happen or has *just* happened in a sequence of events (§11.5). Specifying a wider temporal structure, it is semantically peripheral to the verb, just as it is syntactically peripheral.

In recordings I made with some older speakers who offered to characterise “heavy” versus “light” speech (§4.8.3), I noticed a significant number of incorporated adverbials. This raises the possibility that their obsolescence in MKK is not just an unconscious grammatical change, but may reflect stylistic marking as part of the heavy register, which is associated with older people.

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<sup>151</sup> There may be some marginal exceptions with a *-de* morpheme that sometimes appears to the right of the verb root in MKK, and with the future tense marker *-nu* to its right (e.g. *pina-tji-de-nu* “he’ll cook (sthng)” AM, PSE). This is presumably related to the SMP *-deyida* (§11.5), but seems to have lost its iterative meaning and to function instead as a future marker.

### 10.3.2 Variable order of morphemes

The “idealised” MKK template presented as Figure 10.3.2 above glosses over the actual range of morpheme sequences attested, which span various possibilities from the more “conservative” of SMP to the more “innovative” shown in Figure 10.4.2. While TNS was previously to the left of NUM and IMPF morphemes, in MKK we see both NUM and IMPF variably appearing to the left of TNS. In SMP the three morphemes (or whichever of them appear) are sequenced as:<sup>152</sup>

-TNS-NUM-IMPF

In MKK this same sequence, and sub-parts of it, are attested. But two further sequences are also attested in part or whole:

-NUM-TNS-IMPF

-NUM-IMPF-TNS

I present below MKK evidence for all these sequences, illustrating examples with both past (-*dha*) and future (-*nu*) tense markers where possible.<sup>153</sup>

-TNS-NUM-IMPF (**i.e. same order as SMP**)

(10.3.5) *purdene-yitj-dha-nime=pardi*

3PC.TURN(29).PST-explain-PST-PC.MASC=BE(4).SER

{-TNS-NUM-IMPF}

*they were explaining it* (EM, Notes)

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<sup>152</sup> Though I have found a couple of instances of NUM-TNS in SMP – see §8.5.5.

<sup>153</sup> I do not consider =*nukun* here, which is much less common, and is more modal (apprehensive) in its meaning.

(10.3.6) kunge-rurr-**nu-nime**  
 3PC.PULL(32).IRR-pull-FUT-PC.MASC  
 {-TNS-IMPF}  
*they're going to pull it* (OB, PSE)

(10.3.7) tweni-faiv ma-yit-**nu=ngi** ngay=yu  
 twenty-five 1S.HANDS(8).IRR-hold-FUT=SIT(1).SER 1S=TAG  
 {-NUM-IMPF}  
*I'll have twenty five dollars* (GM, VSE\_Intl3)

-NUM-TNS-IMPF (**innovative for NUM**)

(10.3.8) parde-kut-**nime-dha=pardi**  
 3PC.BE(4).PST-collect-PC.MASC-PST=BE(4).SER  
 {-num-tns-impf}  
*they were collecting it* (LP, Notes)

-NUM-IMPF-TNS (**innovative for NUM and IMPF**)

(10.3.9) pube-rtarl-rtal-**nime=pardi-dha**  
 3PC.BASH(14).PST-chop-RDP-PAUC.MASC=BE(4).SER-PST  
 {-num-impf-tns}  
*they were chopping (wood)* (DP, PSE)

(10.3.10) matha di-yepup=**tji-nu**  
 EMPH 2S.HEAR(15)-listen=SIT(1).SER-FUT  
*you just sit there listening* (DP, 2011-09-01B-02)

(10.3.11) ku yela-wan pani-kut-nime-nu  
 ANIM yellow-ADJ 1INCL.BE(4).IRR-collect-PC.MASC-FUT  
 {-num-tns}  
*we'll all get fifty dollars* (MG, 2011-08-24\_02)

The innovative sequences suggest a change of relative boundedness with NUM and IMPF on the one hand becoming more strongly bound to the verb (while maintaining the relative order between the two), while TNS becomes more peripheral. The purportedly strengthening bond of IMPF is supported by the fact that it is becoming more affix-like in its phonology and its function, as discussed below (§10.4.4). The purported peripherality of TNS is supported by evidence that it is somewhat mobile or clitic-like, with syntactic mobility occasionally attested in SMP (§8.5), though it is not clear just how rare this might have been. However in MKK when a verb is preceded by an adverb or coverb, it is fairly common for TNS to appear on both elements:

(10.3.12) nakurl-**nu** ngi-tjek-**nu**  
 later-FUT 1s.SIT(1).IRR-shit-FUT  
*I'll shit later* (SbM, PSE)

(10.3.13) tharra-**nu** pi-ku-**nu**  
 run-FUT 3S.SIT(1).FUT-run-FUT  
*she's going to run* (AM, PSE)

(10.3.14) kunginire-**dha** kardi-kumkum-**dha**  
 yesterday-PST 3S.BE(4).PST-swim.RDP-PST  
*yesterday he went swimming* (JL, PSE)

The variability of ordering is not equally distributed for the two tense markers. In past-marked (-*dha*) verbs TNS appears to the right of NUM in only about half the instances, but where IMPF is present, or both NUM + IMPF, TNS appears to their right in the majority of instances. By contrast, for future-marked (-*nu*) verbs TNS appears to the right of NUM almost categorically, so the change can be regarded

as almost complete, but in the small number of instances where IMPF appears, NUM usually does not appear to its right. These quantitative patterns will be explored in more detail in §10.4–5.

### *10.3.3 Absences and “blocking”*

In the templatic model of MP morphology, the absence or re-location of one morpheme in the presence of another is taken as evidence of those morphemes sharing a templatic slot. However the variability in my MKK data does not lend itself to this interpretation, but rather to a somewhat fuzzier model in which some functionally redundant morphemes are “optional” – that is to say, they can be either present or absent in the context where they would be expected – and the presence of functionally necessary morphemes discourages the presence of those that are redundant. Throughout this chapter, I speak of such morphemes as “absent”, and where the presence of one morpheme appears to influence the absence of another, I call this “blocking”.

To the right of the verb root there is substantial evidence for blocking. Both TNS and IMPF are sometimes blocked by NUM, which I interpret in terms of functional redundancy. Overall the future tense marker *-nu* is more often absent than is *-dha*, with *-nu* often absent even when it would have been the only post-root morpheme, but *-dha* only absent when other morphemes are present. The optionality of each will also be explored in the quantitative analyses of sections §10.4–5.

Some paradigmatic evidence for suffix blocking is found in the verb conjugation elicitations. When iterating through verb conjugations, beginning with singular forms and moving on to paucal subject forms, in many instances kigay drop either the tense marker (10.3.15–16) or the imperfective marker (10.3.17) when they reach the first form that requires a number marker. This occurs in about half of the 55 relevant conjugations collected:

(10.3.15) [singular forms conjugated with TNS]

ngurdini-wi- <b>dha</b> -ngardi	1S.TURN(29).PST-smoke- <b>PST</b> -IMPF.PST
thurdini-wi- <b>dha</b> -thardi	2S.TURN(29).PST-smoke- <b>PST</b> -IMPF.PST
wurdini-wi- <b>dha</b> -kardi	3S.TURN(29).PST-smoke- <b>PST</b> -IMPF.PST

[paucal forms conjugated with NUM present, and TNS absent]

ngurdini-wi- <b>nime</b> -ardi	1PC.TURN(29).PST -smoke- <b>PC.MASC</b> -IMPF.PST
nurdini-wi- <b>nime</b> -ardi	2PC.TURN(29).PST -smoke- <b>PC.MASC</b> -IMPF.PST
purdini-wi- <b>nime</b> -ardi	3PC.TURN(29).PST -smoke- <b>PC.MASC</b> -IMPF.PST

(PtP, verb conjugation “smoke”)

(10.3.16) [singular forms conjugated with TNS]

ngi-rel- <b>nu</b>	1s.SIT(1).IRR-sing- <b>FUT</b>
tji-rel- <b>nu</b>	2s.SIT(1).IRR-sing- <b>FUT</b>
ki-rel- <b>nu</b>	3s.SIT(1).IRR-sing- <b>FUT</b>

[paucal forms conjugated with NUM present, and TNS absent]

ngi-rel- <b>nime</b>	1PC.SIT(1).IRR-sing- <b>PC.MASC</b>
ni-rel- <b>nime</b>	2PC.SIT(1).IRR -sing- <b>PC.MASC</b>

(AnB, verb conjugation “sing”)

(10.3.17) [paucal forms conjugated with IMPF]

ngem-nham- <b>nganam</b>	1s.21.NFUT-be.afraid- <b>IMPF.NFUT</b>
tjem-nham- <b>thanam</b>	2s.21.NFUT-be.afraid- <b>IMPF.NFUT</b>
dem-nham- <b>kanam</b>	3s.21.NFUT-be.afraid- <b>IMPF.NFUT</b>

[paucal forms conjugated with NUM present, and IMPF absent]

ngemka-nham- <b>nime</b>	1pc.21.NFUT-be.afraid- <b>PC.MASC</b>
nenemka-nham- <b>nime</b>	2pc.21.NFUT-be.afraid- <b>PC.MASC</b>
penemka-nham- <b>nime</b>	3pc.21.NFUT-be.afraid- <b>PC.MASC</b>

(KM, verb conjugation “be afraid”)

Similar effects can be seen in some instances of elicited sentences for which the speakers provide two alternative forms. Note that in 10.3.18 the inclusion of the number marker seems to block *two* other suffixes.

[two forms given in succession, no indication of different meaning]

(10.3.18a) ngube-ngkardu-**ngardi-dha**

1PC.13.PST-see-**IMPF.PST-PST**

(10.3.18b) ngube-ngkardu-**nime**

1PC.13.PST-see-**PC.MASC**

*we could see it*

(JL, VPE)

[two forms given in succession, no indication of different meaning]

(10.3.19a) kardu      pardi-lili-**dha**                      ngarra      rut

PERS              3PL.BE(4).PST-walk-**PST**              LOC              road

(10.3.19a) penime      purne-lili-**nime**                      ngarra      rut

3PC.MASC      3PC.GO(6).PST-walk-**PC.MASC**      LOC              road

*they were walking down the road*

(MN, Notes 2013-11)

There are only a handful of instances where tense, number and imperfective suffixes all appear together in a verb form (e.g. 10.3.5–9 above), even though focused elicitation was used to investigate the relative ordering of these morphemes (§10.6.1). The scarcity of these instances may also be ascribed to a blocking effect, though since there are *some* instances of all three morphemes together, it is clearly not a categorical constraint against their co-occurrence.

The blocking effect cannot be interpreted as a constraint against some absolute number of suffixes (or indeed suffix syllables), since there are instances when a lone suffix is blocked (10.3.16), instances where one of two suffixes is blocked (10.3.15), and instances where two suffixes are both blocked (10.3.18). Neither can the effect be interpreted as competition for a rigid “slot”, since this would not allow these morphemes to co-occur at all. Indeed, the standard conception of templatic slots is not readily applicable to the MKK verb suffixes, given the variability of sequencing.



In most of the examples above it appears to be the paucal NUM marker *-n(g)ime* that blocks TNS and IMPF morphemes, rather than vice versa, and this may be functionally motivated. As discussed elsewhere (§11.2.1), TAM is encoded on both the verb classifier and the tense marker, and in some combinations, including past indicative, this creates functional redundancy. The paucal/plural number distinction, on the other hand, is only encoded on a subset of classifier forms (§11.2), so that without NUM, the paucal number would not be signalled at all on pro-drop clauses. It is not surprising, then, that the most common blocking effect should be the NUM blocking TNS.

#### *10.3.4 Serial verbs to imperfective suffixes*

In the description of SMP verb morphology I noted that the serial verb is variably either an independent word or an enclitic (§8.5.1). In MKK careful speech there are still instances where serial verbs are pronounced as whole and independent words, but in some careful speech instances, and almost all natural speech, they are reduced to suffix-like forms. I focus here on the reduced forms, and refer to them as “imperfective aspect suffixes” (IMPF). The affixal forms are losing both phonological and lexico-semantic qualities of the verb classifiers from which they have evolved, and as we have seen above, are no longer at the periphery of the verb. It is worth recalling at this point that in the “heavy SMP” data recorded by Blythe, serial verbs could host their own number suffixes, but this verb-like quality had already been lost to them in Nordlinger’s “lighter SMP” data (§10.6, §8.2).

The most affix-like forms of IMPF are phonologically reduced from one serial verb in particular, *kanam* BE(4). The initial consonant of the classifier is absent, which following a vowel also leads to the deletion of the first vowel by a regular phonological process (§5.9.4.5). The absent consonant specified subject person/number, but since the person/number specification is fully determined by agreement with the main verb, these consonants are functionally redundant

in the serial verb and its affixal successor. Table 10.3.2 shows the BE(4) classifier paradigm and the reduced IMPF suffixes that have been derived from it. Paucal forms are not included here since they are merged with plural forms when the classifier is used as a serial verb (Nordlinger 2010b).

	NFUT	MKK IMPF	IRR	MKK IMPF	PST	MKK IMPF
<b>1s</b>	nganam	→ -anam	ngani	→ -ani	ngardi	→ -ardi
<b>2s</b>	thanam		thani		thardi	
<b>3s</b>	kanam		pani		kardi	
<b>1incl</b>	thanam		pani		thardi	
<b>1pl</b>	ngarnam		ngarni		ngardi	
<b>2pl</b>	narnam		narni		nardi	
<b>3pl</b>	parnam		parni		pardi	

**Table 10.3.2 Derivation of MKK IMPF suffixes from BE(4) verb classifiers**

The result is a paradigm of three IMPF suffixes, which have no subject agreement marking but agree only with the TAM category of the main verb: *-anam* (NFUT), *-ani* (IRR), *-ardi* (PST):

(10.3.20) mam-ngintha-thadhap-**anam** → [ˌmamŋin̩ˈðaːpanam]  
 3S.HANDS(8).NFUT-DU.FEM-touch.RDP-**IMPF.NFUT**  
*the two of them are touching it* (KM, PSE)

(10.3.21) wilili nungam-lili-**anam** → [ˈwilili ˌnuŋamˈlilinam]  
 walk 3S.FEET(7).NFUT-walk-**IMPF.NFUT**  
*he's walking* (KN, PSE)

(10.3.22) nganki ngiyema-**ani** → [ˈŋanki ŋiˈjemaːni]  
 1PL 1PL.do(34).IRR-**IMPF.IRR**  
*we'll be doing it* (KM, VPE)

- (10.3.23) me-watha-dha-**ardi** → [me'wata,daɟi]  
 3S.HANDS(8).PST-fix-PST-**IMPF.PST**  
*he was fixing it* (SJ, VPE)
- (10.3.24) nyinyi de-ngkardu-**ardi**-dha → ['ɲiji deŋ'kaɟuwaɟiɟa]  
 2s 2s.13.PST-see-**IMPF.PST**-PST  
*you could see it* (JL, VPE)

The imperfective suffix has a more abstract grammatical function – marking imperfective aspect (§11.3.5) – than the more independent serial verbs from which it was derived. Both Street (1996: 210) and N&C (pp. 88–89) describe SMP serial verbs as performing distinct aspectual functions depending on the verb classifier used. BE(4) specifies a *customary* or *habitual* imperfectivity, while any of the other basic intransitives can be used to specify *continuous* aspect. But in the examples above and in ex.10.3.26 below we see BE(4) encoding stative or continuous aspect, showing that it is now signals imperfectivity more generally.

I have witnessed in action the generational tension between specific serial verb classifier selection, and the more abstract MKK imperfectivity. In some development sessions for the Murrinh Patha Phrasebook<sup>154</sup>, I worked with a younger man who sees himself as speaking “new generation” MP (i.e. MKK), and a middle-aged man who takes a personal interest in the maintenance of “heavy” MP. In translating English present continuous or stative sentences they repeatedly disagreed on the use of serial verbs, with the older man insisting that only SIT(1) forms were correct (which accords with SMP grammar), and the younger man insisting that BE(4) forms should be used:

- (10.3.25) mam-nyi-ngkawurl=**dim**  
 3S.DO(8)-2S.DO-head.ache=**SIT(1)**.SER  
*does your head hurt?* (MN, MPP recording session)

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<sup>154</sup> <http://wadeye.org/Murrinh-Patha-Phrasebook/html/>

(10.3.26) mam-nyi-ngkawurl=**kanam**

3S.DO(8)-2S.DO-head.ache=**BE(1)**.SER

*does your head hurt?*

(LP, MPP recording session)

The younger speaker rejected the SIT(1) forms, saying that this was an old way of speaking, and not *his* way (Notes, 2013-07-16). This was a rare case in which I was given overt metalinguistic judgements about different ways of speaking; it was more usual for kigay and other native speakers to talk about a “mixed-up” youth speech style in general (§4.8), but be reticent about giving specific examples.

#### 10.4 Quantitative analysis of *-dha* absence and reordering

There are several studies in which quantitative analysis has been applied to morphological variation and change in cosmopolitan languages (e.g. Walker 2010; Bybee and Moder 1983; Bybee and Brewer 1980; Otheguy, Zentella, and Livert 2007; Nagy, Blondeau, and Auger 2003; Meyerhoff and Walker 2012), but I am not aware of any studies for polysynthetic languages. In this section and the next I use quantitative analysis to investigate changes underway in the MP verb, aiming to discover which of the various innovative configurations lead the changes, what contextual factors are favourable to innovative forms, and which speakers use the most innovative forms. I am able to give partial answers to all these questions.

We have seen above that the past tense marker *-dha* is variable in its sequential position among verb suffixes, with both NUM and IMPF sometimes appearing to its left. It is also variable as to whether it appears at all in contexts where it is expected – i.e. it is subject to the variable “blocking” as defined above (§10.3.3). I present here quantified data from natural discourse and careful speech, showing that re-ordering is about equally likely with NUM and IMPF, and absence of *-dha* is quite common in natural speech, but rare in careful speech. I further use the careful speech data to examine variation among speakers, finding that

innovation is led by younger kigay, while the influence of language background remains unclear.

#### 10.4.1 Natural speech and careful speech data

A collection of clauses extracted from the natural speech corpus, primarily to investigate the grammar of tense/aspect/mood (§11.1.1), includes 106 past-tense clauses in which *-dha* might be expected to appear. Of these it is absent in 41 instances (39%), of which only about half have other post-root morphemes, showing that in natural speech absence of *-dha* is quite common, regardless of whether blocking morphemes are present. Among those instances where it does appear, 41 tokens also include either NUM or IMPF; and in these instances *-dha* shows some tendency to appear in an innovative sequence to the right of NUM (31% of instances), and a very strong tendency to appear to the right of IMPF (87%):

<i>Total 106 tokens of past-tense verbs in natural speech</i>			
41 absent			
65 present	24 <i>-dha</i> only		
	41 combinations	26 with NUM	18 <i>dha</i> - NUM (69%) <b>8 NUM - <i>dha</i> (31%)</b>
		15 with IMPF	2 <i>dha</i> - IMPF (13%) <b>13 IMPF - <i>dha</i> (87%)</b>

**Table 10.4.1 *-dha* absence and reordering in MKK natural speech sample**

A possible explanation for why innovative *-IMPF-dha* should be further advanced than *-NUM-dha* is that the former has an SMP model in other functional arrangements. When the basic intransitive classifiers function as simple verbs, rather than IMPF serial verbs, they have their own tense suffix (e.g. *ngardi-dha* 1S.BE(4)-PST). However if there is such an effect it appears to be neutralised in careful speech data, where the rate of reordering is the same for IMPF and NUM (see below).

The number of tokens here revealing the relative ordering of *-dha* with other morphemes is rather small, so for further quantitative analysis I sought a larger set of tokens via focused elicitation. The careful speech data collected via picture-stimulated elicitation and verb conjugations (§1.5.2–3) provided some 250

tokens of past tense verbs, but only about 50 tokens showing *-dha* in combination with other post-root morphemes. To better understand the ordering variable, I supplemented this by using a “quick and random” elicitation method, asking any kigay I spoke with around the town for translations of sentences such as “they were walking”, “they were talking”, which target the variable. This brought the careful speech dataset up to 101 instances of morpheme combinations. The data includes 25 speakers aged 18–43, mostly producing 3–4 tokens per speaker, with a few speakers contributing 2 or 5.

#### 10.4.2 Absence and reordering in careful speech data

In the total 294 past tense verbs from various sets of careful speech, absence of *-dha* was very rare. There were only 8 instances, and these were all in elicited verb conjugations, always where either NUM or IMPF was present, and with context strongly suggesting a blocking relationship as described in §10.3.3. This very low (and constrained) rate of absence contrasts with natural speech, where we saw that absence occurred in almost half the instances sampled.

Re-ordering, on the other hand, occurs just as much in careful speech as it does in natural speech. Of the 101 tokens showing *-dha* in combination with other morphemes, again about half the instances (43%) have innovative ordering. However, whereas the (small) sample of natural speech instances showed a considerably higher innovation rate with IMPF than with NUM, in the careful speech data re-ordering occurs at about the same rate with each.

<i>Total 300 tokens of past-tense verbs in careful speech</i>			
8 absent			(all appear to be “blocked”)
286 present	177 <i>-dha</i> only		
	101 combinations	67 with NUM	39 <i>dha</i> - NUM (58%) <b>28 NUM - <i>dha</i> (42%)</b>
		24 with IMPF	15 <i>dha</i> - IMPF (62%) <b>9 IMPF - <i>dha</i> (38%)</b>
		10 with NUM and IMPF	4 <i>dha</i> - NUM - IMPF (40%) <b>3 NUM - IMPF - <i>dha</i> (30%)</b>
			<b>3 NUM - <i>dha</i> - IMPF (30%)</b>

**Table 10.4.2 -*dha* absence and reordering in MKK careful speech**

The fact that re-ordering occurs at the same rate in careful speech as in natural speech suggests that it is not a socially or cognitively salient variable. It is certainly not a stylistic “marker” in Labov’s (1972) terms, and it may not even be a social “indicator”, since I have no evidence (yet) of it being associated with any particular social group. On several occasions I have pointed out the variability to speakers, but none has ever showed any awareness of the variation or a strong preference for a “correct” variant.

#### *10.4.3 Variation among speakers*

Among the 25 speakers contributing to the careful speech dataset, five consistently produced the SMP ordering, seven consistently produced either reordering or absence of *-dha*, and the remaining 13 produced a mixture of standard and innovative forms. Given that morphemic sequencing is usually presumed to be a fairly rigid part of the grammar (Bickel et al. 2007), it was surprising to find that about half the speakers produced diverse orderings within just a few tokens produced. These speakers seamlessly switched from one order to another within the space of a few seconds in response to my questions – in many cases without any hesitation that might indicate doubts about “correctness”, or greater satisfaction with one form or another. Neither did the “mixed bag” forms come out in any particular sequence: some speakers gave the SMP order first, then switched to an innovative order, some speakers did the reverse.

The fact that *-dha* reordering has such low cognitive salience suggests that it cannot have any sociolinguistic meaning attached to it, and in particular is not a youth identity marker. This is further supported by the similar re-ordering rates found in natural and careful speech data, which suggests that this feature is not subject to hypercorrection. If this is the case then speakers are unlikely to change their use of the variable in the course of their lifetimes, and it is therefore a grammatical change in progress. I tested the variable’s relationship to speaker

age to investigate this hypothesis, and found that in multivariate analysis that younger kigay are more likely to reorder the suffixes than older kigay ( $p = 0.01$ ). I also included in this analysis language heritage, and two linguistic factors, none of which showed robust significance:<sup>155</sup>

*Linguistic factors:*

- Verb root present/absent?
- Verb classifier can occur without root?

*Social factors:*

- Age group
- Patrilanguage
- Matrilanguage
- Speaker identity (random effect)

Again I ran the multivariate analysis in Rbrul (Johnson 2009), and again both step-up and step-down procedures selected the same model, using just age group as a fixed factor, and with speaker identity as a random effect. Results are shown in Table 10.4.3:

<b>PST reordered with respect to NUM and/or IMPF</b> (deviance = 97.98)		
<i>Age group</i> (N speakers), ( $p = 0.01$ )	<i>% reordered</i> (N tokens)	<i>Centred factor weight</i>
<b>Younger kigay 18–27</b> (15)	<b>48%</b> (54)	<b>0.673</b>
<i>Older kigay 32–43</i> (10)	23% (30)	0.327
<b>Random effect: Individual speaker</b> <b>Not significant:</b> Matrilanguage ( $p = 0.54$ ), Patrilanguage ( $p = 0.06$ ), Verb root present ( $p = 0.10$ ), Verb classifier can be rootless ( $p = 0.81$ )		

**Table 10.4.3 Social factors influencing PST reordering**

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<sup>155</sup> For the analysis of social factors I included no more than the first four tokens from any one speaker, resulting in a total of 84 out of the 107 “morpheme combination” tokens being used (see Table 10.4.2). I did this to avoid any given speaker having an unduly great influence, which is further controlled by including individual speaker identity as a random effect.



I considered it possible that verb roots might affect the configuration of suffix morphemes, if for example the root might have some special morphosyntactic relationship with one or other of the suffixes, or perhaps just because the classifiers that can occur without roots are generally also the most frequent in discourse (§8.3). However neither the actual presence/absence of a root in the verb produced, nor whether the classifier used is capable of occurring without a root (i.e. as a simple verb) was calculated to be statistically significant.

Turning to linguistic heritage factors, I tested for language heritage because the innovative sequence NUM - IMPF - TNS matches the templates documented for Marri languages (Green 1989; Ford 2010), as well as Ngan'gi (Reid 2003:100), though the latter has not had such an intensive degree of sociolinguistic contact with MP. As with other quantitative sociolinguistic analyses in this thesis (cf. §7.5), the distribution of participants across a matrix of language heritage factors was rather too uneven to be well suited for factor analysis. The number of speakers with each category of Patrilinguage and Matrilinguage, along with their cumulative rates of *-dha* innovation, is illustrated in Table 10.6.3.

Patriling → Matriling ↓	Marri langs (12)	Murrinh Patha (7)	Murriny Kura (2)	Other (4)	<i>Average</i>
Marri langs (18)	55% (10)	80% (4)	100% (1)	34% (3)	53%
Murriny Kura (1)	33% (1)	-	-	-	33%
Murrinh Patha (4)	60% (1)	0% (1)	0% (1)	20% (1)	25%
other (2)	-	33% (2)	-	-	25%
<i>Average</i>	53%	50%	40%	32%	43%

**Table 10.4.4: *-dha* innovation by linguistic heritage. Rows indicate matrilineal heritage, and columns indicate patrilineal heritage. Each cell gives the overall percent of innovative *-dha* ordering produced by speakers with that heritage combination, and the number in parentheses indicates the number of speakers.**

The results of the multivariate analysis did not clearly suggest any heritage effect. Matrilinguage was calculated to have no influence whatsoever ( $p = 0.54$ ), and while Patrilinguage was suggestively close to statistical significance ( $p = 0.06$ ), it suggest MP paternity as a favourable factor ( $p = 0.06$ ), which runs counter to the language contact hypothesis. However I would argue that the

heritage data here should not be interpreted at all based on such a weak result, given how severely it is constrained by the poor distribution of speakers across the demographic cells (Tagliamonte 2006).

### 10.5 Quantitative analysis of *-nu* absence and reduction

As mentioned in §10.4.2, the future tense marker *-nu* has already undergone an almost complete sequence shift in MKK to the right of NUM.<sup>156</sup> The innovative ordering occurs in almost all instances in both careful and natural speech data - I have identified only one instance of the conservative sequence *-TNS-NUM* for *-nu* (illustrated as ex.10.3.6), so reordering is virtually complete in this case.

However *-nu* is also often absent, or subject to severe phonetic reduction to the verge of inaudibility, and this phenomenon is variable enough to facilitate quantitative analysis. The absence/reduction of *-nu* occurs frequently even when no other post-root morphemes are present, so blocking cannot be attributed a major role. Like other morphemes that we have found to be variably absent, *-nu* has a degree of functional redundancy, since its tense/mood contribution is shared with the verb classifier (more on this below). Absence/reduction occurs in about 70% of natural speech tokens, and 30% of careful speech tokens – though again we will here only use the careful speech data for quantitative analysis, since it offers a more focused view of the factors in question.

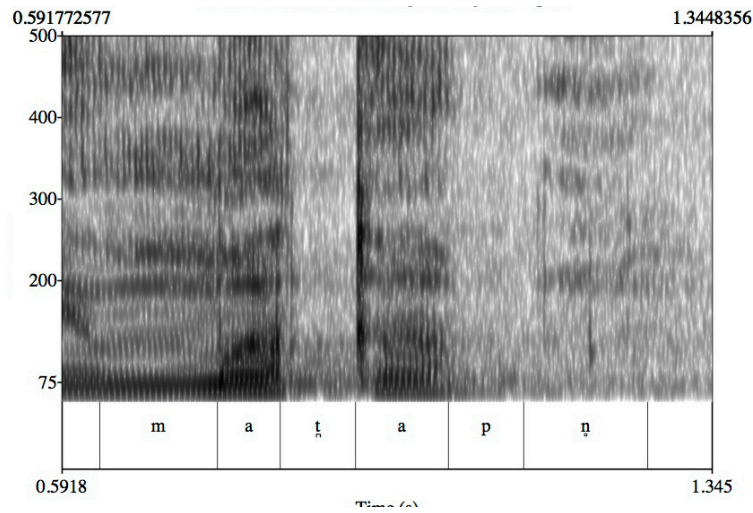
#### 10.5.1 Absence and reduction

The greater audio quality of careful speech recordings shows that *-nu* realisation is on a cline of reduction from fully realised [nu] tokens, along a scale of devoicing via [n̥u] to some tokens which have only a brief voiceless nasal release

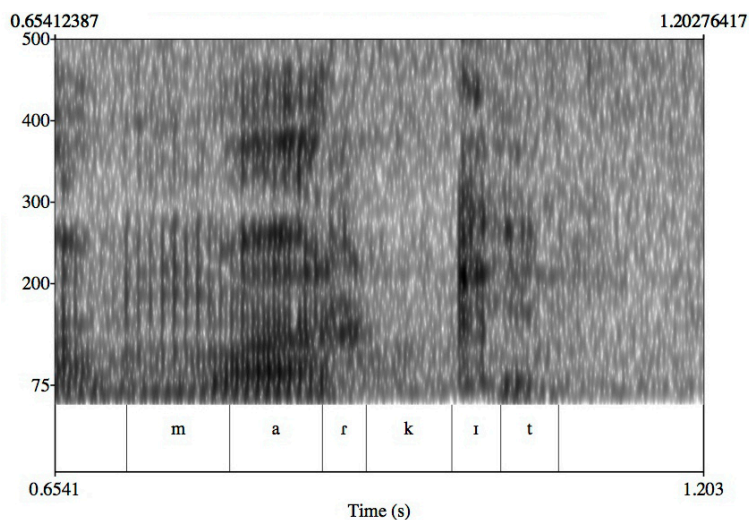
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<sup>156</sup> The data is far less decisive with regards to innovative ordering of *-nu* and IMPF. There are only 10 instances in my data where these morphemes combine, and the conservative TNS - IMPF order appears in eight of them. But given the rarity of these morphemes co-occurring, I will not discuss their relative order further.

at the edge of audibility [ŋ] (ex. 10.5.1), to tokens where there is no detectable acoustic realisation (10.5.2).



(10.5.1) nantji ma-thap-**nu** → [naŋʝi 'maʈapŋ]  
 THING 3S.HANDS(8).IRR-touch-FUT  
*he's going to touch it* (DM, PSE)



(10.5.2) ngay=warda ma-dharrket-**nu** → [ˈŋajwaɖa mark<sup>h</sup>ɪt]  
 1s=IMM 1S.HANDS(8)-tie-FUT  
*I'll tie it* (SbM, PSE)

A similar type of phonological reduction is applied to other verb suffixes in MKK, including paucal number markers *-n(g)ime* and serial verbs such as *dim* SIT(1),

though these and many other lenition phenomena are beyond the scope of this thesis.

In my quantitative analysis of *-nu* absence/reduction (henceforth FUT-reduction), I treat both reduction (any token realised without a voiced vowel) and absence as manifestations of the innovative variant. This is pragmatically motivated, to avoid making arbitrary distinctions between severely reduced tokens and non-phonological breath release; but it also seems analytically sound, since it is the same speakers in the sample who produce both reduced and absent tokens.

### *10.5.2 Linguistic factors influencing absence/reduction*

There were a substantial number of relevant future-tense verbs in my natural speech data, however these were not used for quantitative analysis because the lower audio quality makes decisions about phonetic realisation too unreliable. The picture-stimulated careful speech data (§1.5.2) offered a better alternative, with 253 tokens of future verbs that might be expected to be marked with *-nu*.

There is some question about how the presence/absence of *-nu* should be treated with respect to tense and mood marking. Nordlinger and Caudal (2012) argue that *-nu* is present on future indicative verbs, but absent on imperative or other future irrealis verbs, which use a distinct “future irrealis” classifier for third-person forms. Walsh (1976: 215) claims there is no formal distinction between imperative and future indicative, and gives an example verb with *-nu* present and an imperative translation. However he notes elsewhere that *-nu* is “often deleted” (p. 116). In my MKK data there is no modal distinction provided by the verb classifier even for third person forms, where a single irrealis classifier form has emerged (Ch. 11); neither do I find that the presence/absence of *-nu* makes a categorical modal distinction, since my data contains many examples where *-nu* is absent but the utterance is clearly an assertion of fact (ex. 10.5.2 above), as well as a few examples where *-nu* is present on utterances that are clearly directives:



- (10.5.4) ngarra ma-na-nu? [JBM]  
 what 3s.do(8).IRR-EP<sup>157</sup>-FUT  
*what's he going to do?*
- ma-dharrket-nu  
 3S.DO(8).IRR-tie-FUT  
*he's going to tie it* (SM)

As we will see below, a small minority (< 10%) of the responses were framed as second-person, and these do indeed have a higher rate of FUT-reduction, though there are still 40% of tokens in this category that have an overt *-nu* (see below).

A linguistic factor that *was* categorical in determining FUT-reduction was the appearance of enclitics on the verb. These could be either adverbials (=warda “imminent”, =kathu “hither”), or the prosodic tags =yu, =ya, =ka.<sup>158</sup> The careful speech data included 15 instances in which one of these was present, and *all* of these had overt *-nu*. On the other hand FUT-reduction occurred variably both when the verb was at the right margin of the utterance, and when other constituents followed. This suggests that it is the right margin of the clitic-group domain (§5.10.2) that is the variable environment for FUT-reduction; or conversely, that *-nu* is never reduced when it is internal to a clitic group.

FUT-reduction becomes more likely the more syllables separate *-nu* (or its expected slot) from the head of a metrical foot, i.e. a syllable with primary or secondary word stress (§5.10). All else being equal, the reduction is three times

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<sup>157</sup> In my own grammatically unsound MP I would often use this epenthetic *-na* in verbs such as this. Epenthesis of this type is not described in any SMP grammar, and I have not formally documented either – I cannot say whether I correctly acquired this or introduced it as a second-language error. In any case kigay seemed to understand the question clearly enough.

<sup>158</sup> There is no grammatical description available for these monosyllabic tags. All we can say about them at this stage is that they are frequently attached to the right of various constituents, and that they do not have any strongly semantic or referential function.

as likely to occur in ex.10.5.5 (distance = 3 syllables) as in 10.5.6 (distance = 1 syllable):

(10.5.5) ba-gurduk-nu → ('ba gu ɖuk nu)  
 1s.13.IRR-drink-FUT  
*I'll drink it* (SbM, PSE)

(10.5.6) ma-ngintha-yit-nu → ma (,ŋin ɬa) ('jit nu)  
 3DU.DO(8).IRR-DU.FEM-hold-FUT  
*the two of them will hold it* (KN, PSE)

We have established that the context for FUT-reduction is at the end of the prosodic clitic-group, which is normally also an intonation phrase. We can now add to this that reduction occurs more readily the further it is from a pitch/amplitude peak. These facts suggest that *-nu* is under-articulated, even to the point of non-articulation, as an energy-saving measure where articulatory energy is at its lowest. Strings of unaccented syllables at the end of a prosodic contour have been identified as a phonetically dispreferred feature (Beckman and Pierrehumbert 1986:269), which may lead to the omission of functionally redundant morphemes. FUT certainly does have low functional load, since the future tense (or at least irrealis) is already signalled by the TAM category of the verb classifier (§11.3); however there is some evidence casting doubt on the role of functional load in linguistic variables (Labov 1987).

### 10.5.3 Variation among speakers

The careful speech data showed very marked differences between individual speakers. Out of 24 kigay, two individuals reduced 100% of *-nu* tokens (MJ, 22, Marri Tjevin / Murriny Kura; SM, 18, Marri Ngarr both parents); five speakers reduced half their tokens or more; others reduced only a minority of tokens, and seven speakers did not reduce at all. I therefore investigated whether age or

language heritage could be shown to have a significant effect on FUT-reduction, including the linguistic factors identified above in the multivariate analysis:

Percent of <i>-nu</i> tokens reduced/absent at right-margin of verbal clitic group (grand mean = 29%, N = 253)			
	Factor	Percent (N)	Centred factor weight <sup>159</sup>
<i>Linguistic factors</i>			
Distance from stress ( $p < 0.01$ )	<b>3 syllables</b>	<b>46% (44)</b>	<b>0.743</b>
	<b>2 syllables</b>	<b>29% (158)</b>	<b>0.502</b>
	1 syllable	16% (51)	0.256
Verb subject person ( $p < 0.01$ )	<b>Second person</b>	<b>60% (20)</b>	<b>0.775</b>
	Non-second	27% (233)	0.225
<i>Speaker factors</i>			
[Speaker patrilanguage ( $p = 0.17$ )]	<b>Marri langs (14)</b>	<b>40% (136)</b>	<b>0.766</b>
	<b>Murrinh Kura (2)</b>	<b>24% (29)</b>	<b>0.553</b>
	Murrinh Patha (5)	15% (52)	0.410
	other (3)	11% (36)	0.262
Speaker age ( $p < 0.05$ )	Younger age corresponds to more frequent reduction, $\log\text{odds} = -0.099$		
Random factor: <i>speaker identity</i>			

**Table 10.5.1 Independent variables predicting *-nu* reduction. Greyed cells indicate lack of statistical significance.**

As with *-dha* reordering, kigay are more likely to reduce *-nu* the younger they are ( $p < 0.05$ ). I also tested both Patrilanguage and Matrilanguage, and found the latter to have no effect whatsoever on FUT-reduction. However Patrilanguage was a suggestive but statistically sub-significant factor group ( $p = 0.17$ ), with Marri heritage favouring reduction.

Based on the available data, there is no linguistic motivation for Marri language speakers to reduce *-nu* as a contact effect: Marri languages use future tense markers in exactly the same position, and for some varieties the form used is the possibly cognate *-ni* (Green 1989; Ford 2010). So we would expect the MP future marker to be readily acquired by Marri language bilinguals. Nor is there any record of variable FUT-reduction in Marri languages (Green, *p.c.*).

<sup>159</sup> A representation of factor weight produced by Rbrul (Johnson 2009). For a brief explanation see §7.4.1.



I hypothesise that if there is any correlation between Marri patrillanguage and FUT-reduction is not the result of historical language contact, but an effect of language attitude. We saw above that FUT-reduction is more prevalent in natural speech than in careful speech (though it is difficult to measure precisely in the former), and we have also seen that FUT-reduction is related to the articulatory effort required by producing multiple syllables after the final pitch peak in a prosodic contour. This suggests that those kigay who reduce more in careful speech are showing less willingness to “speak strongly” in the careful speech situation, perhaps because they are less comfortable going on record as representatives of the language. Such an attitudinal effect is not surprising for Aboriginal youth, given that authority for language rests with old people in Aboriginal societies (Evans 2001); but it might also be expected that Marri heritage would be an independent factor, given the highly ambivalent attitude I have found among Marri-heritage kigay with respect to the MP language (§4.3).

### **10.6 Change and variation to the right of the verb classifier**

My MKK data has rather sparse evidence illustrating the order of morphemes to the right of the verb classifier (slots 2–3), with only a couple of dozen verbs in the data showing relevant combinations of morphemes in this location. The limited evidence available does exhibit some signs of change and variation compared to SMP. Evidence of variation in this sequence that suggests that the “slot” relationships between morphemes (i.e. where the presence of one category prohibits the presence of another) are not categorical, but rather show non-categorical “blocking” (§10.3.3) affecting morphemes with low functional load.

Figures 10.6.1 and 10.6.2 show the verb templates posited for “heavy SMP”, as spoken by people of MP clan heritage born in the 1930s (Blythe 2013), and “lighter SMP” as spoken by people of diverse clan backgrounds born in the 1950s (Nordlinger 2010a). The slots currently under discussion are highlighted.

<i>Coverb</i> †	(1)	(2)	(3)	(4)	(5)	(6)	(6)	(7)	(8)	<i>Serial verb</i>	
Verb root	<b>Classifier stem</b> (with fused subject) pers/num and TAM)	Reflex. / recip. (RR)	Object pron (OBJ), Subj number (SUBJ.NUM)	Reflex. / recip. (RR)	Incorporated body part, Applicative	<b>Verb root</b>	Tense	Subj/Obj number, Adverbial		Classifier stem	Subj number

Figure 10.6.1 “heavy SMP” verb complex (Blythe 2013) († marginal)

<i>Coverb</i> †	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	<i>Serial verb</i>	
Verb root	<b>Classifier stem</b> (with fused subject) pers/num and TAM)	OBJ, SUBJ.NUM	RR	Incorporated body part, Applicative	<b>Verb root</b>	Tense	Subj/Obj number, Adverbial		Classifier stem	

Figure 10.6.2 “lighter SMP” verb complex (Nordlinger 2010) († marginal)

Blythe (2005 Field Notebook 4) attests flexible ordering of the RR marker with respect to OBJ and SUBJ.NUM, as well as the possibility of two RR markers with a SUBJ.NUM in between. Nordlinger’s (2010a) data, recorded with speakers some 20 years younger, reflects a more tightly constrained order with OBJ and SUBJ.NUM always immediately adjacent to the classifier. In both templates however OBJ and SUBJ.NUM markers are in complementary distribution, with the appearance of OBJ forcing SUBJ.NUM to re-locate to slot 7. This “slot-sharing” only makes sense in light of the fact that the dual SUBJ.NUM markers, *-n(g)intha*, have recently evolved from an ethical dative object pronominal series (Blythe 2010).

### 10.6.1 Sequences attested in MKK

My MKK data attests a slightly different range of possibilities from those modelled by the templates above. Two morphemes can be present together to the right of the classifier, and the attested sequences are SUBJ.NUM - RR (allowed in SMP) but also for one speaker SUBJ.NUM - OBJ (not attested in SMP). There are various instances where the presence of one morpheme seems to block the presence of another, but while this relationship holds only between OBJ and SUBJ.NUM in SMP, in my data it is also found with SUBJ.NUM and RR, with variation as to which morpheme is absent (more on this below). This cannot be modelled using a template structure, since the potential for two morphemes in sequence

required two “slots”, but the blocking effect sometimes found between these same morphemes would require that they share a slot.

As stated above, the data available for MKK regarding this sequence is sparse, there being only a handful of natural discourse utterances that happen to combine these morphemes, plus about a dozen verbal examples that I elicited from two speakers. I elicited 12 careful speech instances, from three kigay speakers, producing verbs that combine SUBJ.NUM with OBJ, which are attested as sharing a slot (i.e. SUBJ.NUM categorically blocking OBJ). In all these cases the SUBJ.NUM was blocked, and re-located to slot 7 as predicted:

(10.6.1) *tjelput*      *nguma-nintha-mpa-watha-nintha-nu*  
house      1S.HANDS(8).IRR-~~DU.MASC~~-2S.IO-make-DU.MASC-FUT  
*we two will build a house for you*      (GP, Notes 2014-09-26)

(10.6.2) *pumam-ka-ngi-yit-nime*  
3PL-~~PAUC~~-1S.DO-hold-PAUC.MASC  
*they are holding me*      (DP, Notes 2014-09-27)

On the other hand I have identified one instance in natural discourse where SUBJ.NUM combines with OBJ (ex. 10.6.3), and about a dozen where SUBJ.NUM combines with RR (10.6.4).

(10.6.3) *nga-nintha-nyi-pak-nu=matha*      *tumen*  
1S.POKE(19).IRR-~~DU.MASC~~-2S.DO-put-FUT=EMPH      *two.ppl*  
*us two will put it (in a tin) for you*      (PtP, 2012-06-02)

(10.6.4) pangkin      dem-**nintha-na**<sup>160</sup>-mut-mut  
back              3S.POKE.RR(21)-DU.MASC-RR-give-RDP  
*they are standing back to back (lit. giving each other their backs)*  
(GM, VSE\_3-9)

The sequence found in ex.10.6.3 suggests that for this speaker SUBJ.NUM and OBJ do not share a templatic slot, as they do in SMP (§8.2) – though further datapoints would be required to show whether this variant is idiosyncratic, or whether it has a broad distribution among kigay. However we will see below that further evidence can be gleaned from morphemic absences – i.e. instances where morphemes *fail* to combine.

The appearance of SUBJ.NUM to the left of OBJ as in ex.10.6.3, rather than sharing a slot with it, could be interpreted as showing SUBJ.NUM binding more closely to the verb classifier, which encodes the subject pronominal it modifies. As mentioned above, the dual SUBJ.NUM markers, *-n(g)intha*, have recently evolved from an ethical dative object pronominal series (Blythe 2010), explaining why in SMP they occupy a morphosyntactic OBJ position (and therefore resist combining with any other OBJ marker). But as the new function becomes established, the OBJ-like syntactic restriction may become obsolete. For further research, I propose that structured visual stimuli should be used to test how these morphemes interact in the speech of various kigay.

When *-n(g)intha* is blocked by OBJ in SMP it “re-locates” to the right of the verb root. We have already seen one (perhaps unusual) instance in MKK where this relocation does not occur; conversely, I have identified a single instance where *-nintha* appears in the post-root position *without* any morpheme to block it from slot 2:

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<sup>160</sup> The phonological form of RR is itself variable, though not discussed here. It could be characterized as /nV/, since the vowel often agrees with adjacent vowels – but it also sometimes takes the form *-nu* irrespective of adjacent vowels.

(10.6.5) nukunu kas ngay pana me-berti-**nintha**  
 3s cousin 1s ANAPH 3S.HANDS(8).PST-go.with-**DU.MASC**  
*he and my cousin used to stick together* (GM, 2011-09-17\_03)

This further suggests that the realisation of the dual SUBJ.NUM morpheme in MKK is variable.

### 10.6.2 Blocking in MKK

As described above, in SMP there is a slot-sharing relationship between SUBJ.NUM and OBJ, but the small amount of available MKK data suggests that this blocking is not categorical. There is also one instance in the corpus where paucal SUBJ.NUM *-ka* and RR would be expected to co-occur, but instead the SUBJ.NUM is blocked (the morpheme *-ka* is absent):

(10.6.6) mange pumem-~~ka~~-**nu**-ma-dhadhap-nime  
 hand 3PL.HANDS.RR(10)-~~PC~~-**RR**-hand-touch.RDP-PC.MASC  
*they are touching (each others') hands* (DP, PSE)

There is somewhat more data (about a dozen instances) where the *dual* SUBJ.NUM should co-occur with RR, and in these cases SUBJ.NUM is present, while RR is usually, but not always, absent:

(10.6.7) pangkin-pangkin dem-**nintha**-~~na~~-mut-mut  
 back-RDP 3S.POKE.RR(21)-**DU.MASC**-**RR**-give-RDP  
*those two are standing back to back (lit. giving each other their backs)*  
 (AnB, VSE\_3-9)

(10.6.8) pangkin dem-**nintha-na**-mut-mut  
 (=10.6.4) back 3S.POKE.RR(21)-**DU.MASC-RR**-give-RDP  
*those two are standing back to back (lit. giving each other their backs)*  
 (GM, VSE\_3-9)

RR has been described as “optional” in previous studies (Nordlinger n.d.), but I would argue more specifically that its presence/absence is influenced by the presence of other morphemes to the right of the verb classifier, with the blocking relationship determined by functional load. Note that the dual subject SUBJ.NUM *-n(g)intha* has a high functional load, combining with an otherwise singular-marked verb classifier to specify a dual subject. But RR is functionally redundant, since the same feature is marked by the selection of verb classifier (Nordlinger n.d.). In my MKK data RR is usually absent where the dual SUBJ.NUM occurs (as in ex.10.6.8 above), but it is usually present for singular reflexive verbs for which there is no SUBJ.NUM suffix:

(10.6.9) mem-**ni**-ngka-purl  
 3S.HANDS.RR(10)-**RR**-face-wash  
*he's washing his face* (KM, VSE\_2-1)

We have seen one instance (ex.10.6.6) where RR itself seems to do the blocking, with the unexpected absence of the paucal SUBJ.NUM marker *-ka*. But this further supports the notion of a functional load effect, since the paucal SUBJ.NUM marker, unlike the dual, is independently marked by a *-n(g)ime* suffix to the right of the verb root, and is therefore redundant. These relationships could also be further investigated by focused verbal elicitation from a range of speakers.

In summary, my data has instances of both dual SUBJ.NUM blocking RR, and paucal SUBJ.NUM being blocked by RR – but the former is clearly not a categorical rule, and for the latter there is only one datapoint.

- DU.SUBJ-RR (more common, e.g. 10.3.5)
- DU.SUBJ-RR (less common, e.g. 10.3.6)
- PC.SUBJ-RR (only one data point, e.g. 10.6.6)

If the blocking relationship between these morphemes is not a matter of rigid slot-sharing, but rather a variable in which morphemes are more likely to be absent in the presence of other (more functionally necessary) morphemes, then instead of having a shared slot 3 as in Figure 10.3.3 above, we can instead posit a sequence of two morphemic layers attaching to the Classifier:

[[[Classifier] SUBJ.NUM] RR]

For OBJ and RR we cannot posit any relative ordering, since they are syntactically incompatible.<sup>161</sup>

### 10.7 A diachronic view of the MP verb

The MP polysynthetic verb is clearly the product of the fusion of two words at some point in the past. I have speculated that this may have occurred in the quite recent past (§9.2.2), though the timing is not crucial to the argument in this section. Nordlinger notes in her analysis of templatic structure in MP that explanation for the ordering of morphemes, which is synchronically arbitrary, must be sought in diachronic processes (2010a:337–8). I here develop this suggestion, arguing that despite the synchronic fusion of the two parts of the verb – classifier and root – the current changes underway in the verb are more explicable if these are analysed as separate syntactic units.

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<sup>161</sup> I have not tested this myself, but Nordlinger (*p.c.*) reports that these are incompatible. Blythe (2004, Field notebook 4) does manage to produce a very few instances in elicited data, with both OBJ-RR and RR-OBJ sequences produced.

The following diachronic phases of verb structure can be posited, the first being a historical reconstruction, and the subsequent four attested in data from Blythe (2013; 2010), Nordlinger (2010a) and MKK.

**Pre-fusion MP**

<b>Inflecting verb</b>	RR	=TNS =OBJ =ADV	IBP 162	<b>Coverb</b>	=TNS =OBJ =ADV	<b>Serial verb</b>	SUBJ. NUM
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**“Heavy SMP” (Blythe 2013)**

<b>Classifier stem</b>	RR	OBJ, SUBJ.NUM	IBP	<b>Verb root</b>	TNS	=ARG.NUM =ADV	<b>Serial verb</b>	SUBJ.NUM
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**“Lighter SMP” (Nordlinger 2010)**

<b>Classifier stem</b>	OBJ, SUBJ.NUM	RR	IBP	<b>Verb root</b>	TNS	ARG.NUM, ADV	<b>Serial verb</b>
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**MKK polysynthetic verb**

<b>Classifier stem</b>	SUBJ.NUM	OBJ , RR	IBP	<b>Verb root</b>	ARG.NUM	IMPF	=TNS =ADV
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**MKK phrasal verb**

<b>Verb root</b>	=TNS =ADV	<b>Inflecting verb</b>	SUBJ.NUM	OBJ , RR	ARG.NUM	IMPF	=TNS =ADV
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**Figure 10.7.1 Diachronic phases of the MP verb**

I hypothesise that in “pre-fusion” MP there were enclitics that could attach to either the inflecting verb or the coverb, as in other north-western Australian languages (§8.2.1). This is supported by the obsolescent ethical dative objects described by Blythe (2010), which variably appear to the right of the classifier or to the right of the root. By extension, I hypothesise that other OBJ types may have once had this flexibility. I also reconstruct the TNS markers with clitic-like

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<sup>162</sup> I here represent the incorporated body part (IBP) as being prefixed to the CV, producing what I would characterise as a compound stem. However it may instead have attached as an enclitic on the IV. Data on the more recently fused phrasal verbs in Ngan’gi finds the IBP attached to the IV (Reid 2003: 101–8). However, Reid also analyses the IBP as being attached to the verb root in Ngan’gi polysynthetic verbs, based on prosodic factors. His prosodic argument does not apply for MP, but I nonetheless view the IBP + root as a tightly bound compound because (a) there are no cases where a morpheme intervenes between them; (b) the MP lexicon is full of lexicalised – i.e. semantically non-compositional – IBP + root combinations (§8.4.4).



mobility, given that there are some signs of this in all phases of documented MP. I also presume that, as in other CV + IV languages of the area, there was a degree of flexibility in the order of the two words, with clitics usually attaching to whichever word came first.

The fusion of the verb gives rise to the “arbitrary” (i.e. not semantically layered) morpho-syntactic structure of SMP. As described above (§10.6), the morphologically arbitrary locations of the dual SUBJ.NUM markers *-n(g)intha* in SMP are a result of their recent re-analysis from OBJ markers. Unfortunately for the equally arbitrary paucal SUBJ.NUM markers *-ka* and *-ngime* I have not identified any historical clues on which to base a hypothesis.<sup>163</sup> As mentioned in §10.3.4, the serial verb has lost the capacity to host suffixes as it has become more affix-like, and in some innovative MKK forms can be regarded as an IMPF suffix. In SMP, where the grammaticalisation of IMPF is less advanced, ADV remains anomalously close to the verb, with NUM and IMPF outside it.

In MKK some of these anomalies are resolved. To the right of the root we have seen that ARG.NUM and IMPF are becoming more closely bound to the verb, while ADV and TNS become peripheral. If we are to suppose that there are semantically motivated morphosyntactic bonds at work (Bybee 1985:34–5), i.e. the same principles that drive typical layered morphology, it must be the Classifier and its OBJ suffix towards which ARG.NUM and IMPF are drawn. The number specification of ARG.NUM modifies either the subject (transitive or intransitive) that is fused into the Classifier, or the OBJ; IMPF meanwhile modifies the TAM value of the Classifier (§11.3.5). But the IBP + Root unit is “in the way” of these posited semantic bonds; so if we are to interpret the innovative order as having any sort of semantic/syntactic logic, we must treat the IBP + Root as an independent unit:

[[[[Classifier] SUBJ.NUM] OBJ, RR] # [IBP [Root]]] ARG.NUM] IMPF] TNS]

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<sup>163</sup> Blythe (2013) speculates that these may have evolved from the word *numi* meaning “one”, though robust historical evidence is yet to be identified.

The corollary of this is that the Classifier and the morphemes to its right form another morphosyntactic unit, for which the limited evidence available also shows signs of semantically motivated layering (§10.6). Note also that the “blocking” relationships described in this chapter mostly match this layering, with more inner affixes blocking more outer ones. But what is not explained by any of this is how from a pre-fusion CV + IV structure, typical of north-western Australia, the CV re-located to the right of the IV, and became “stuck” there (syntactically set and phonologically fused), rather out of place, while new inflectional morphology continued to build up to its right. A similar sequential switch occurred in the transition from phrasal to polysynthetic verb in Ngan’gi (Reid 2003; see also §8.2.1), and in Maranunggu (Tryon 1970; see also §9.2). I leave this topic for further syntactic research.

#### *10.7.1 The MKK phrasal verb*

The growing use of phrasal verbs (CV + IV) in MKK effectively resolves the problematic positioning of the Root, leaving an Inflecting verb with more typical layered morphological structure. ARG.NUM is in this case directly attached to the SUBJ + OBJ unit which it modifies, with IMPF and TNS layered outside that in the typologically expected order (Bybee 1985; Matthews 1991:226–233; Baker 1996:30):

[Coverb] # [ [[[Infl-verb] SUBJ.NUM] OBJ, RR] ARG.NUM] IMPF ] =TNS] =ADV]

Note that this more layered sequence also applies to all “simple” verbs, which have no uninflecting root.

It is based on evidence from the phrasal verb that I posit TNS and ADV as clitics in the emergent syntax, since both of these can attach variably to either or both the CV and the IV unit (see further examples in §10.3.2 and §9.9):

(10.7.1) tharra-**nu** pi-ku-**nu**  
 run-FUT 3S.SIT(1).FUT-run-FUT  
*she's going to run* (AM, PSE)

(10.7.2) count=**warda** ngamam  
 count=IMM 1S.DO(34)  
*I'm counting them now* (DP, 2012-09-01a)

In summary, when we analyse diachronic changes in the MP verb, there do appear to be principles of semantically motivated, layered morphology at work. However the position of the Root in the polysynthetic structure causes complications for this interpretation, which can only be resolved if we view the string of morphemes in the verb as built up from two units, the Classifier and the Root, which have some degree of syntactic independence, even though phonological fusion usually ties them together.

## 10.8 Summary

In this chapter we have seen that MKK verb morphosyntax exhibits a high degree of variation in terms of morpheme ordering and the presence/absence of certain morphemes. This is rather unusual by the norms of language description, but it may simply reflect the fact that intergenerational change and variation have been very little studied in highly synthetic languages. These findings are a key part of my overall project to investigate what sort of sociolinguistic variation occurs in languages and social settings that are most distinct from the cosmopolitan contexts where the vast majority of sociolinguistic study has been done.

The variable morpheme ordering examined in this chapter very likely shows changes in progress, given that innovative variants have become dominant (at least for some morpheme combinations) within the space of a few decades relative to the SMP data. The lack of awareness speakers show with regard to re-

ordering, and the equal rates of re-ordering in careful and casual speech, suggests that they are not socially meaningful, but rather are an undercurrent of change occurring on a level of grammatical structure where speakers have little conscious control. This morphosyntactic level seems to have its own logic, as the changes found in both the unified polysynthetic verb and the phrasal CV + IV verb improve the mapping of semantics onto syntax, resolving some of the anomalies found in the SMP verbal template.

Yet morphosyntactic change may not be altogether unrelated to socially recognised ways of speaking. We have seen in Chapter 9 that the CV + IV structure has been stimulated to a large extent by English/Kriol lexical borrowing, which is in part a matter of youth-indexed speech or the “mixed up” Murriny Kura style (§4.4, §4.8). In the final section of this chapter we saw that phrasal CV + IV verbs have a closely related, but slightly different morphosyntactic structure to polysynthetic verbs in MKK, and could be regarded as resolving an attachment anomaly for the ARG.NUM morpheme (as well as providing a verbal borrowing facility, as described in the last chapter). Conversely, the use of adverbial endoclitics, the position of which was also anomalous in terms of semantic scope, is obsolete in MKK, and may indeed have been part of the “heavy” style of MP that is maximally distinct from Murriny Kura in the current sociolinguistic repertoire of the community. This may point to a connection between morphosyntactic complexity and high-register speech.

## Changes in tense, aspect and modality

### 11.1 Introduction

MP tense, aspect and modality (TAM) is encoded primarily on the classifier stem, which may optionally combine with a tense marker and/or a serial verb to the right of the verb root. This overt morphology further combines with a covert telicity category to produce TAM encodings, as described in some detail by Nordlinger and Caudal (2012, henceforth "N&C"). Their analysis forms the background to this chapter, though I will diverge from them in analysing the verb classifiers as being specified for tense only, and not for aspect.

Murriny Kardu Kigay (MKK) exhibits changes underway in the TAM morphology used and functional range of some morphemes. The main change is a merger of what I characterise as “non-core” classifier categories, progressing a long-term “drift” already evident in the standard Murrinh Patha (SMP) classifier paradigms. There may also be some subtle shifts underway in the interaction of telicity and tense marking, though on this point more investigation of archival SMP data is required. Finally, MP uses an array of particles to modify aspectual and modal meanings; some of the particles attested in SMP may be obsolete in MKK, while two or perhaps three new particles have been borrowed from English/Kriol.

For the most part, the morphological variation and change discussed in this chapter does not appear to have any social indexicality. I therefore do not consider it to be properly “sociolinguistic” description, but include it here nonetheless as an example of grammatical changes unfolding below the level of cognitive salience.

### *11.1.1 MKK corpus sources*

My analysis of MKK TAM is based primarily on the natural speech items in the corpus, with some secondary evidence provided by the picture-elicited careful speech sessions (§1.5). The conversational items in the corpus provide the most diverse range of TAM encodings, since they include a wide range of speech acts looking temporally forward, backwards, to the present moment or its immediate consequences, and including questions, hypotheses and directives (Searle 1969). The narrative passages that appear in these recordings demonstrate past-reference sequences where one clause is frequently used to provide discursive framing for the next, which is a key context for the use of imperfective viewpoint.

A collection of 322 clauses were extracted from the natural speech corpus, with the aim of sampling the full range of overt TAM morphology in the data. I went through the corpus items line-by-line and extracted a copy of any clause that either (a) included a configuration of TAM morphology not yet represented in the collection; (b) included a TAM configuration not yet represented for the speaker; (c) encoded a TAM category that I had identified as variably encoded. The 322 clauses were collected in a spreadsheet and coded for all relevant TAM features. The resulting collection is not a controlled quantitative sample of MKK TAM, but can be taken as a rough snapshot of natural speech patterns. The spreadsheet of coded clauses is included with this thesis as Appendix V.

The picture-elicited careful speech data contains a much narrower range of TAM types, but has the advantage of demonstrating the same clauses as spoken by various kigay of different ages, and also including clauses designed to test certain TAM variables. This data will be used to support quantitative analysis of the verb classifiers category merger.

## **11.2 Verb classifier TAM categories**

The core of TAM encoding in MP occurs on the verb classifier (§8.3), which fuses TAM information with subject person/number information. Three core tenses

can be identified in SMP – non-future (NFUT), future (FUT) and past (PST) – these being “core” in the sense that they fairly consistently have distinct classifier forms. The NFUT category encodes either past or present tense, depending on the telicity of the verb (§11.3). Two further TAM categories are used – future irrealis (FUTIRR) and past irrealis (PSTIRR) – though these are only distinguished in some person/number forms, and elsewhere are syncretic with FUT or PST. Finally, most classifiers have a distinct “presentational” (PRSNL) third-person form, which has the same TAM value as the NFUT form, but marks a subtle epistemic or rhetorical distinction.<sup>164</sup>

MKK exhibits an almost complete merger of the non-core FUTIRR and PSTIRR categories with the core FUT category, producing a broader category that is used for all future tenses, and irrealis modalities of any tense. I label this merged category “irrealis” (IRR). Furthermore, the PST category, which is mostly distinct in SMP, is variably merged into the IRR category in MKK. There may also be a decline in the use of the PRSNL category (§11.2.6), though this has not been investigated in detail.

### 11.2.1 *The SMP classifier TAM paradigm*

MP verb classifiers have clearly evolved from compositional sequences specifying person, number and TAM, though these have long since fused into unanalysable morphemes (Forshaw 2013:24–30; §8.3.2). Further diachronic “erosion” is evident in the fact that many cells in the paradigms have merged. First and third person forms are sometimes syncretic (e.g. in VC8, 9, 13), as are some paucal and plural forms (e.g. in VC3, 19, 26), and in my analysis paucal/plural are *never* distinct for the NFUT category (§8.2, footnote 1).

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<sup>164</sup> Discussion of MP tense has here been limited to absolute tense, though I have found some evidence that relative tenses can also be generated through discursive framing. For example, in a past reference narrative, the future-marked clause *nandji kap martnu* means “I was going to win the cup” (LP, 2012-06-30).

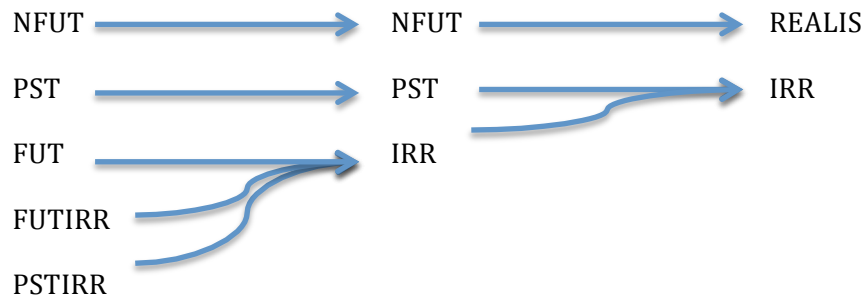
FUT / FUTIRR are syncretic for first- and second-person forms in all classes, suggesting that this may have only ever been a third-person distinction, and even third-person forms are syncretic for classifiers 8–18.<sup>165</sup> Where FUT and FUTIRR are distinct, this is always an alternation of FUTIRR initial /k/ versus FUT initial /p/. The PSTIRR category is distinct in about half the classifiers, while in the remainder it is either identical to PST (VC 1, 8, 9, 10, 12-16, 18, 21, 24-27, 30-33), or in two classifiers (3, 4) almost identical to FUTIRR (Blythe, Nordlinger, and Reid 2007). The PST category is distinct for most classifiers, but there are five fairly rare classifiers (VC26, 28, 35–7) in which it is mostly syncretic with FUT. From this point of view we might limit the “core” classifier TAM categories to just REALIS and IRR, given that at a minimum some classifiers have just two distinct forms. The former then encodes present and past clauses (depending on telicity, see §11.3), while the latter encodes a wide range of past and future tenses, and irrealis modalities.

The possible distinctions and mergers of TAM categories exhibited across classifiers can be represented as a sort of implicational merging diagram (Figure 11.2.1). At a maximum, the most conservative (least eroded) classifiers distinguish the five categories on the left. Many merge three of the categories into a single irrealis category, and a few further merge the PST function into this same category, in which case the a simple “realis/irrealis” labelling seems most appropriate. Note that while the merger of FUT/FUTIRR/PSTIRR into a single IRR category seems quite intuitive, the merger of PST (indicative) into this category is semantically quite unintuitive (§11.2.5).

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<sup>165</sup> One possible explanation for the lack of FUT / FUTIRR distinctions in VC 8–18 singular forms would be that these have lost their initial /pV/ and /kV/ syllables. I also note that these are all highly transitive classifiers – though it is not obvious how this might relate to the syncretism.





**Figure 11.2.1 Merged TAM classifier distinctions**

Table 11.2.1 illustrates *MOVE(6)*, one of the classifiers with a more complete set of distinctions. Unsurprisingly, this appears to be a very frequently used classifier. *NFUT*, *PST*, *FUT* and *PSTIRR* classifiers are all distinct, and *FUTIRR* is distinct for third person subjects.

<b>MOVE(6)</b>		<b>NFUT</b>	<b>PST</b>	<b>FUT</b>	<b>FUTIRR</b>	<b>PSTIRR</b>	<b>PRSNL</b>
<b>Sing.</b>	<b>1</b>	ngurran	ngurrini	ngurru	ngurru	ngurri	
	<b>2</b>	thurran	thurrini	thurru	thurru	thurri	
	<b>3</b>	wurran	wurrini	purru	kurru	wurri	kurran
<b>1 incl.</b>		thurran	thurrini	purru	purru	thurri	
<b>Pauc.</b>	<b>1</b>	-	ngurne	nga	nga	nguye	
	<b>2</b>	-	nurne	na	na	nuye	
	<b>3</b>	-	purne	pa	ka	puye	
<b>Plur.</b>	<b>1</b>	ngumban	ngurni	nguru	nguru	nguyi	
	<b>2</b>	numban	nurni	nuru	nuru	nuyi	
	<b>3</b>	pumban	purni	puru	kuru	puyi	kumban

**Table 11.2.1 Verb classifier paradigm GO(6) (Blythe, Nordlinger, and Reid 2007). Shading has been added to highlight syncretisms between TAM categories.**

Table 11.2.2 illustrates *SURFACE(26)*, an infrequent classifier that is attested with just a handful of roots, all relating to rhythmic lateral surface motions such as *-kurrk* “sharpen a tool”, *-ripurl* “wipe someone’s bottom”. *SURFACE(26)* merges *PST* into the *FUT/FUTIRR* category in all but third-person singular, while for *PSTIRR* the forms elicited are variably distinct or merged – probably indicating a

historically distinct form in the process of merger.<sup>166</sup> Also note that paucal and plural number categories are merged for this classifier.

SURFACE(26)		NFUT	PST	FUT	FUTIRR	PSTIRR	PRSNL
<b>Sing.</b>	<b>1</b>	ngilam	ngila	ngila	ngila	ngila ~ ngilangi	
	<b>2</b>	tjilam	tjila	tjila	tjila	tjila ~ tjilangi	
	<b>3</b>	dilam	dila	pila	kila	dila ~ dilangi	-
<b>1 incl.</b>		tjilam	tjila	pila	pila	tjila ~ tjilangi	
<b>Pauc.</b>	<b>1</b>	-	ngilla	ngilla	ngilla	ngilla ~ ngillangi	
	<b>2</b>	-	nilla	nilla	nilla	nilla ~ nillangi	
	<b>3</b>	-	pilla	pilla	killa	pilla ~ pillangi	
<b>Plur.</b>	<b>1</b>	ngillam ~ ngillangam	ngilla	ngilla	ngilla	ngilla ~ ngillangi	
	<b>2</b>	nillam ~ nillangam	nilla	nilla	nilla	nilla ~ nillangi	
	<b>3</b>	pillam ~ pillangam	pilla	pilla	killa	pilla ~ pillangi	-

**Table 11.2.2 Verb classifier paradigm SURFACE(26) (Blythe, Nordlinger, and Reid 2007).**

**Shading has been added to highlight syncretisms between TAM categories.**

Though there is considerable syncretism of the classifier forms, it must be kept in mind that TAM is additionally encoded through tense suffixes (§8.4.6), as well as serial verbs and other markers, to be discussed below. NFUT has no tense suffix, the PST and PSTIRR categories combine with a *-dha* PST suffix, FUT combines with a *-nu* FUT suffix, and FUTIRR combines with a range of tense suffixes to produce different TAM readings:

Classifier TAM	Suffix	Clause polarity conditions / Meaning
NFUT	∅	Always +
FUT	-nu	Always +
PST	-dha	Always +
PSTIRR	-dha	Either + or -

<sup>166</sup> This paradigm was elicited by Street (1987), and carried over into Blythe et al. (2007).

<i>Classifier TAM</i>	<i>Suffix</i>	<i>Clause polarity conditions / Meaning</i>
FUTIRR	∅	Either + or - / Imperative, deontic or conditional readings
	-nu	Always - / Negative future
	-dha	Always + / Present counterfactual
	-nukun	Either + or - / Undesirable, negative imperative or negative deontic

**Table 11.2.3 Classifier and tense suffix combinations (based on N&C: 109)**

We will see below that in MKK FUT/FUTIRR have merged into a single IRR classifier, while in the previous chapter (§10.4–5) we have seen that tense suffixes in MKK are variably absent/present for all classifier categories. For FUT and FUTIRR categories this means that the grammar of “classifier + tense-suffix = TAM reading” as specified by N&C is not substantiated in MKK. FUT classifiers often occur without the *-nu* suffix, while FUTIRR forms sometimes occur with the *-nu* suffix in positive polarity clauses. The FUTIRR + *-dha* combination occurs in negative polarity (*contra* the rule above), while the positive polarity occurrence encoding present counterfactual, attested by N&C (p. 108), is unattested in MKK. Evidence on these points is presented in the following sections.

### 11.2.2 The merger of FUT and FUTIRR in MKK

In MKK the “non-core” classifier TAM categories – i.e. those which only have distinct forms for some classifiers or some person/number cells – show substantial progress in further merging into the “core” categories. For FUT and FUTIRR, which in SMP are only distinct for third-person forms, the merger is almost complete.

The set of natural speech clauses contains 40 examples that feature a third-person subject that would have distinct FUT/FUTIRR forms in SMP – i.e. with alternating initial /p/ for FUT and initial /k/ for FUTIRR. In 38 (95%) of these instances the FUTIRR classifier is used, even though these include both future indicative readings (exx.11.2.1–2) and a range of irrealis readings such as conditional protasis (11.2.3), adversative (11.2.4) and negative generic (11.2.5–

6). For the examples that follow I gloss verb classifiers using the SMP FUT and FUTIRR labels, to demonstrate that this erstwhile semantic distinction no longer functions as such.

(11.2.1) [describes shooting a flying fox with a shotgun]

matha	<b>kurru-yittjit</b>	BAF
EMPH	3S.GO(6).FUTIRR-heavy	bang
<i>it'll fall down, BANG!</i>		(WL, 2012-06-02)

(11.2.2) [prediction of sunset based on smoke in the air]

tjaba	da	retwan	nganaka	<b>kirra-nu</b>
evening	TIME	red	AGREE?	3S.STAND(3).FUTIRR-FUT
<i>it'll be a red sunset, right?</i>				(LP, 2012-06-02)

(11.2.3) nantji weyi **kirra=ka**

THING hole 3S.STAND(3).FUTIRR=TOP

<b>ka-ngkap</b>	nantji	nyinda-re	ngawa
3S.POKE(19).FUTIRR-block	THING	ANAPH-INSTR	RIGHT?
<i>if there's a hole, that stuff blocks it</i>			(GbM, 2011-08-24)

(11.2.4) [speculative discussion of black-magic practitioners]

kardu	<b>ka-mpa-ruy</b>	ngatha=ya	tjelput=ya
PERS	3S.POKE(19).FUTIRR-2S.IO-visit	still=TAG	house=TAG
<i>the man still (might) come around to your house</i>			(ED, 2011-09-17)

(11.2.5) mere le **kani-nintha**

NEG happy 3S.BE(4).FUTIRR-DU.MASC

*they don't like it (tea with milk)* (PIP, 2011-09-01b)

(11.2.6) kardu muntak-pun-nyi<sup>167</sup> ne mere-ngarra  
 PERS old-PL-2S.DO-XX RIGHT? not.possible  
 gibap kuma-mpa kuru  
 give.up 3PC.DO(8).FUTIRR-2S.IO GO(6).SER  
*those old people, eh, they will never give up to you* (PtP, 2012-06-02)

By contrast, there are just two instances of a distinct FUT form being used (11.2.7–8); and even these were only found after a dedicated search of the corpus for such forms. Example 11.2.8 further confirms the lack of semantic function associated with the FUT/FUTIRR formal distinction, since here FUT occurs in a conjunct clause marked as hypothetical by the indefinite particle *kama*, and where the other verb uses the FUTIRR form. It should be noted that while hypothetical markers are used in this utterance, the event referenced (the sun going down and disappearing) is quite certain to happen. Pragmatically, kigay often use hypotheticals to discuss future events of which there is little doubt; perhaps this stylistic/pragmatic habit should be seen as another contributing factor to the convergence of FUT and FUTIRR.

(11.2.7) kardu purdu-pi-nu=pani  
 PERS 3S.TURN(29).FUT-waste-FUT=BE(4).SER  
 kanyi=yu ngathan ngay  
 PROX=TAG brother 1s  
*lives are being wasted here, my brother* (SL, 2012-06-12)

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<sup>167</sup> I interpret the inclusion of the *-nyi* direct object here as semantically bleached, see §4.7.2.



### 11.2.3 Variability of the FUT/FUTIRR merger in careful speech

Multivariate analysis of careful speech data further supports the argument that the FUT/FUTIRR merger is a change-in-progress, and again identifies young age and Marri language heritage as the positive speaker factors correlated with the innovative variant (§7.5, §10.5). The rarity of erstwhile FUT forms in natural speech already provides strong evidence that the future indicative function is being subsumed by a merged IRR category. In careful speech data FUT is somewhat more frequent, and variable production across 24 kigay permits a more controlled analysis of how the merger is distributed among individuals.

The picture-stimulated careful speech data includes 83 verb tokens for which there are distinct FUT and FUTIRR forms in SMP, and these are evenly split at 43 FUT : 40 FUTIRR. As I argued in the previous chapter (§10.5.2), most or all of the utterances in this data are likely to be assertive (i.e. modally realis) speech acts. The even FUT:FUTIRR split in this data contrasts with the natural speech data reported above, where FUTIRR forms account for 95% of tokens, suggesting that at least some kigay use both the innovative and the conservative forms, and consider the latter to be more correct. For example DP (27, Mendhe / Magati Ke) prefers the innovative form by 12 : 1 in natural speech, but in his careful speech session prefers the conservative form 4 : 2. Providing further evidence for a careful/informal register alternation, I noticed in conversation with a 41-year-old man, who is one of my MP teachers and tends to speak carefully for my benefit, that he corrected himself from *kurdulatj* FUTIRR “he will return” to the *purdulatjnu* FUT form (FN, 2013-06).

The split between FUT/FUTIRR forms is distributed somewhat unevenly across tokens of different verb classifiers. Table 11.2.4 shows the distribution among verb classes for which multiple tokens are available, with the single-token classes grouped together as *other*.

Verb classifier	FUT : FUTIRR	Forms
SIT(1)	9 : 8	pi, ki
BE(4)	2 : 3	pani, kani
MOVE(7)	6 : 7	puni, kuni
POKE(19)	12 : 6	pa, ka
HEAT(27)	3 : 6	pina, kina
TURN(29)	3 : 7	purdu, kurdu
PULL(32)	3 : 3	pungu, kungu
<i>other</i>	5 : 0	
Total	43 : 40	

**Table 11.2.4 Distribution of FUT/FUTIRR forms according to verb classifier**

Note that classes HEAT(27) and TURN(29) have twice as many of the innovative form as the conservative, while POKE(19) has twice as many of the conservative form. This raises the possibility that the change is occurring at different rates for different classifiers, or perhaps according to lexicalised classifier + root combinations. The limited data here does not permit further investigation of this relationship, but for this dataset the classifier is a statistically significant influence on the use of FUT/FUTIRR forms under multivariate analysis, as is the absence/presence of the *-nu* tense suffix. Where the suffix is totally absent (note that this includes only full absences, and not reduced forms as in §10.7.1), the FUTIRR form becomes dominant (6:1 tokens), which is to be expected, since the deletion of *-nu* is also an innovative speech feature.

Turning to speaker factors, the distribution of the FUTIRR tokens has a significant correlation with younger age and Marri patrilineage –the same speaker characteristics that predict other non-standard variants in this thesis. The question of whether this might involve a contact effect will be addressed below (§11.2.6). The significant linguistic and speaker factors predicting use of the innovative forms are summarised in Table 11.2.5:



Percent of distinguishable FUT/FUTIRR forms that use the FUTIRR form (grand mean = 48%, N = 83)			
	Factor	Proportion (N)	Centred factor weight
Verb classifier (p < 0.01)	HEAT(27)	67% (9)	0.985
	BE(4)	60% (5)	0.971
	FEET(7)	54% (13)	0.967
	TURN(29)	70% (10)	0.953
	SIT(1)	47% (17)	0.879
	PULL(32)	50% (6)	0.520
	POKE(19)	33% (18)	0.477
	<i>other</i>	0% (5)	< .001
<i>-nu</i> (p < 0.01)	<b>Absent</b>	86% (7)	<b>0.906</b>
	Present	45% (76)	0.094
Speaker patrilanguage (p < 0.05)	<b>Marri langs (14)</b>	64% (45)	<b>0.795</b>
	<i>other</i> (3)	39% (13)	0.642
	Murrinh Patha (5)	31% (13)	0.584
	Murriny Kura (2)	17% (12)	0.093
<i>Speaker age</i> (p < 0.01)	Younger age corresponds to more frequent reduction, <i>logodds</i> = -0.182		
Random factor: <i>speaker identity</i>			

**Table 11.2.5 Independent variables predicting use of FUTIRR classifier form. Among Speaker patrilanguage factors, “other” and “Murriny Kura” are too sparsely populated to interpret.**

#### 11.2.4 The obsolescence of the PSTIRR category

In MKK the past irrealis (PSTIRR), classifier is in sharp decline, being replaced in most cases by the merged IRR classifier form, or occasionally by the PST form. We saw above that in SMP PSTIRR has a distinct form for only about half the 38 verb classifiers. It functions to encode past negative events, and N&C also report that it encodes foreclosed counterfactuals (possibilities that did not come to pass), though the examples provided for the latter function are inconclusive, as the widespread syncretism between PST and PSTIRR applies to all instances cited, meaning that they could alternatively be interpreted as the PST category.<sup>168</sup>

<sup>168</sup> All examples of foreclosed counterfactuals in N&C (pp. 105-6) and Caudal and Nordlinger (2011: 6-7) use classifiers VC8, 9, 13, 15, in which PST and PSTIRR are not distinguished. These could therefore be interpreted as instances of the PST category. These syncretisms beg the question of how speakers distinguish between a statement meaning “X happened” (indicative) and “X should have / could have happened” (foreclosed counterfactual), given that the forms are identical. E.g. *be-lele-dha=wa* 3S.13.?PST/PSTIRR-bite-PST=EMPH “? it bit him / ? it was going to bite him” (Caudal and Nordlinger, p. 7). Under N&C’s interpretation these might be resolved by the

I identified 26 past negative clauses in the corpus of MKK natural speech, of which 22 (85%) use the merged IRR classifier category (ex 11.2.10).<sup>169</sup> There is one instance that clearly uses the PST form (11.2.11), and three instances that cannot be reliably distinguished between PST and PSTIRR forms due to formal similarity or syncretism (11.2.12).

(11.2.10) manangka **ki-dha** Belyuen=yu  
 NEG 3s.sit(1).FUTIRR-PST [NAME]=TAG  
*he didn't stay at Belyuen* (PIP, 2011-09-01)

(11.2.11) dam-ma-wirndel ... mere **wurrini**  
 3S.POKE(19)-hand-swoop PAUSE NEG 3S.GO(6).PST  
 manta ngarra kura mam-nga  
 near LOC water 3S.SAY(34)-1S.IO  
*"he grabbed it, making sure it didn't go into the water," he told me*  
 (PIP, 2011-09-01)

---

constraint against encoding Telic situations with PST, which would constrain verbs of this type to be understood as PSTIRR. However I also cast some doubt on their posited PST + Telic constraint, and some of the examples I posit for PST + Telic past indicative encoding *cannot* be interpreted as PSTIRR (§11.3.6).

<sup>169</sup> Four of these instances use the BE(4) classifier, where IRR and PSTIRR are distinguished only by a retroflex nasal, *karni-* and *kani-* respectively. Without higher quality recordings, these could also be interpreted as persistence of the PSTIRR classifier – but this interpretation would be perverse, given the general shift to IRR, and the evidence yielded in careful speech recordings.

(11.2.12) marrare mere **wurdi**<sup>170</sup>-wi-dha  
before NEG 3s.turn(29).?PSTIRR-smoke-PST  
ngarra kanyi pardi-dha-ngime  
REL PROX 3PL.be(4).PST-PST-PAUC.FEM  
*before he wouldn't smoke when they were here* (BM, 2011-09-01)

The obsolescence of PSTIRR forms is further supported by focused elicitation data. I used English to elicit 6–8 past negative clauses from each of five kigay aged 18–34, giving a total of 35 clauses. According to the N&C's description of SMP, past negatives (along with past counterfactuals and past conditionals) are among the clause types that use PSTIRR (p. 109). All clauses were elicited with third-person singular subjects, since this is most highly differentiated in verb classifiers; and a range of verb classifiers were targeted covering those for which PSTIRR is formally distinct, those for which PSTIRR is merged with PST, and those in which PSTIRR is almost merged with FUT/FUTIRR. In all cases but one the merged IRR classifier was used, indiscriminate of whether SMP has a distinct PSTIRR form (*wurri-*, 12.2.14), PSTIRR syncretic with PST (*me-*, 12.2.15), or syncretic with FUT/FUTIRR (*karni-*, 12.2.16). There was just one clause produced using a distinct PSTIRR form (12.2.17).

(11.2.14) nukunu=ka manangka **kurru**-lili-dha ngarra shop  
3S=TOP NEG 3S.GO(6).IRR-walk-PST LOC shop  
*he didn't go to the shop* (SJ, VPE)

(11.2.15) nukunu=ka mere **ma**-watha-dha  
3S=TOP NEG 3S.HANDS(8).IRR-fix-PST  
*he didn't fix it* (PP, VPE)

---

<sup>170</sup> This instance could be the distinctly PSTIRR form *wurdi-*, but it could also be a somewhat lenited token of the PST form *wurdini-*. Such distinctions cannot be made reliably in natural speech recordings.



The collated sample of MKK natural speech clauses contains five clear instances of IRR classifier forms being used for past indicative clauses, compared to about 100 clauses where the PST classifier is used:

(11.2.18) marrare=ka      nekingime=top    ku      ngatin  
                  before=TOP      1INCL.PC.MF=TOP ANIM      raw  
                  **pani-murrk-tha**-ngime      ngawa  
                  1INCL.BE(4).IRR-eat-PST-PC.FEM      AGREE?  
                  *in the old days we used to eat raw meat, eh?* (DP, 2011-09-01b)

(11.2.19) nankunime **ne-dha**-nime      ngarra  
                  2PC.MASC      2PC.sit(1).IRR-PST-PC.MASC      LOC  
                  kangkarl    kanyi-thu    ngay=ka    pana  
                  above      PROX-HITH    1s=TOP      DIST  
                  *you mob were up there on top, I was down there*  
                  (GbM, 2011-09-17)

However, I suspect that the innovative use of IRR for past imperfective may be more common than these numbers would suggest, but has been obscured by hypercorrection in the transcription process. For example, in the classifier BE(4), the IRR form *thani-* might be hypercorrected to the PST form *thardi-* by native speaker consultants working on the transcription process, and the reduced audio quality of natural speech recordings tends to prevent such fine discrepancies from being identified.

Further evidence of a variable PST/IRR merger is exhibited in the verb conjugation data, where about 20% of the forms expected to be PST are given using IRR classifiers, combined with the expected *-dha* past tense suffix. Throughout these conjugations, elicitation was done using English indicative forms, and negators were never used, so it is unlikely that IRR forms produced here have anything other than past indicative meaning. In some cases the IRR forms were produced only for non-singular forms, and in general IRR appeared more often in classifiers that already have some PST/IRR syncretic forms attested

even in SMP. Table 11.2.6 shows an elicited MKK verb conjugation in which non-singular PST forms are either merged with IRR, or are not produced at all by the speaker. Table 11.2.7 shows a paradigm in which almost all forms are produced, but the whole series has merged with IRR.

**SIT(1) + -murrk “eat”**

	<i>SMP FUTIRR</i>	<i>SMP PST</i>	<i>MKK IRR</i> <i>as conjugated by NP</i>	<i>MKK PST</i> <i>as conjugated by NP</i>
1s	ngi-murrk	ngini-murrk-tha	ngi-murrk-nu	ngini-murrk-tha
2s	tji-murrk	tjini-murrk-tha	tji-murrk-nu	tjini-murrk-tha
3s	ki-murrk	dini-murrk-tha		dini-murrk-tha
1incl	pi-murrk	tjini-murrk-tha		
1pc	nge-murrk-nime	ngarrine-murrk-tha- nime	nge-murrk-nime-nu	<b>nge</b> -murrk-tha-nime
2pc	ne-murrk-nime	nirrine-murrk-tha- nime	ne-murrk-nime-nu	<b>ne</b> -murrk-tha-nime
3pc	ke-murrk-nime	pirrini-murrk-tha- nime	ke-murrk-nime-nu	<b>pe</b> -murrk-tha-nime
1pl	nguyu-murrk	ngarrini-murrk-tha		
2pl	nuyu-murrk	nirri-murrk-tha		
3pl	kuyu-murrk	pirri-murrk-tha		

**Table 11.2.6 “eat” verb conjugation elicited from NP (age 35), and SMP forms (Blythe, Nordlinger, and Reid 2007)**

### STAND(3) (+ *-at*) “stand”

	<i>SMP FUTIRR</i>	<i>SMP PST</i>	<i>MKK IRR</i> <i>as conjugated by AxL</i>	<i>MKK PST</i> <i>as conjugated by AxL</i>
1s	ngirra-at	ngirri-at-tha	ngirra*-nu	<b>ngirra</b> -at-tha
2s	tjirra-at	tjirri-at-tha	tjirra-nu	<b>tjirra</b> -at-tha
3s	kirra-at	pirri-at-tha	tjirra-nu	<b>kirra</b> -at-tha
1incl	pirra-at	tjirri-at-tha	pirra-at-nime-nu	
1pc	ngira-at	nge-at-tha-nime	<b>ngiye</b> -nime-nu	<b>ngira</b> -at-tha-nime
2pc	nira-at	ne-at-tha-nime	nira-at-nime-nu	<b>nira</b> -at-tha-nime
3pc	kira-at	pe-at-tha-nime	dira-at-nime-nu	-
1pl	ngira-at	ngi-at-tha	ngira-at-nu	<b>ngira</b> -at-tha
2pl	nira-at	ni-at-tha	nira-at-nu	<b>nira</b> -at-tha
3pl	kira-at	pi-at-tha	-	-

**Table 11.2.7 “stand” verb conjugation elicited from AxL (age 23), and SMP forms (Blythe, Nordlinger, and Reid 2007).**

\* The basic intransitive STAND(3) can be used on its own to mean “stand”, but the verb root *-at* can also optionally be added to mean “stand” or “stand up”.

A PST/IRR merger in MKK may be encouraged by the use of IRR for past negative clauses (as described above), which creates a pattern of IRR combining with the *-dha* past tense suffix. The polarity of the clause then only needs to be switched from negative to positive to give an IRR + *-dha* past indicative encoding:

(11.2.20a) nantji      mere      kani-part-tha  
 THING      NEG      3S.BE(4).IRR-leave-PST  
*he didn't leave it*      (AnB, VPE)

(11.2.21b) nantji      ~~mere~~      kani-part-tha  
 THING      ~~NEG~~      3S.BE(4).IRR-leave-PST  
*he left it*      (synthetic example)

N&C (p. 108) do attest the usage of FUTIRR + *-dha* for past verbs in a positive polarity, but they describe this structure as producing a *present counterfactual* reading:





category of Marri languages, like the merged MP IRR, marks all future tenses, as well as irrealis modalities of any temporal type; however when MP classifiers merge into two categories, the IRR category further subsumes the (mostly Atelic) past tense marking that is otherwise handled by PST (§11.3), whereas in Marri languages the imperfective past tense marking otherwise handled by REALIS IMPF is subsumed by REALIS. The major underlying difference between the two systems may be that telicity is not a grammatical function in Marri languages in the way it is for MP; however there is no detailed documentation available for Marri Ngarr (or any other dialect apart from Marrithiyel), and a comparative analysis of MP and Marri TAM systems is beyond the scope of this chapter. I limit myself here to noting that Marri has either 2- or 3-category classifiers, which have fairly similar functional ranges to the more merged classifiers in MP.

Given that the FUT/FUTIRR/PSTIRR → IRR merger in MKK makes it more nearly isomorphic with Marri language TAM, it is possible that this change has been influenced by the heavy language contact of the Mission era (§4.3). On the other hand, we have seen that the mergers exhibited in MKK progress mergers that were already underway in various parts of the classifier paradigm – though the rate of change between SMP and MKK does appear to be quite rapid. It is possible that this is a case where a diachronic merger moves in the direction that the language was already “drifting” in its internal dynamics, but L2 acquisition by speakers of another language that is already further down that path (or has followed another path to reach the same point) has hastened the change. This could only be further investigated with L2 MP speech data from the generation who spoke Marri languages as L1; but at present such data is far too scarce to provide for analysis of verbal morphology.

### *11.2.7 Presentationals*

The presentational (PRSNL) classifier is not a TAM category, but rather a pragmatic alternative to the NFUT form, which exhorts the addressee to see the referent. I include a brief description here because I do not agree with the

analysis of previous works, where it is labelled an “existential” form, and glossed as meaning “to exist” (Street and Kulampurut 1978). In form, PRSNL is differentiated from NFUT by the replacement of the initial consonant with /k/, and sometimes a change of first-syllable vowel.<sup>172</sup> There are PRSNL forms only for third-person subjects, and none are attested for the most highly transitive classifiers (e.g. VC13, 17). The PRSNL appears to have a cognate structure in Ngan’gi, where some third-person present verbs, which generally begin with /w/, alternate with a /g/-initial form; this has also proved somewhat elusive for grammatical analysis (Reid 1990:108–111).

Some NFUT and PRSNL alternates are listed in Table 11.2.8.

<i>Classifier</i>	3S.NFUT	3S.PRSNL
SIT(1)	dim	kem
LIE(2)	yibim	kabim
FEET(7)	nungam	kunungam
MOUTH(19)	dam	kam
MOUTH.RR(21)	dem	kem

**Table 11.2.8 NFUT and PRSNL classifier forms**

An “existential” assertion may be part of the function of PRSNL, but it does not generalise across all instances of its use. In particular there are plentiful examples of their use in reference to entities of which the existence has already been clearly established. In the following examples, the PRSNL form is used for a referent that has already been talked about – sometimes even within the last few utterances – so that it would be totally redundant for the speaker to posit the existence of the referent.

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<sup>172</sup> Note that the phonological marking of PRSNL in contrast to NFUT is the same as FUTIRR in contrast to FUT. In both cases they are marked just for third-person subjects, replacing the initial consonant with /k/. However apart from this there is no other obvious connection between PRSNL and FUTIRR.

(11.2.23) mam-pun-ngkarlarlay=kanam                      kardu-nu

3S.DO(8)-3PL.DO-wave.RDP=BE(4).SER              PERS-DAT

*he's waving for someone to come*

ma-manpi-nu

3S.DO(8).FUT-help-FUT

*someone will help him*

**kunungam**-pirt=kurran                                      pangu

3S.FEET(7).PRSNL-depart=GO(6).SER              DISTAL

*he is leaving*

thawatj              dji                                      **kurran**

careful              DISTAL                                      3s.go(6).PRSNL

*very quietly he goes*                                      (MbM, VSE\_ 2-11-Heavy)

A wider review of PRSNL utterances in comparison to NFUT utterances defies any grammatical or semantic interpretation of the alternation; though there is a tendency for the PRSNL form to be applied when a referent makes its first appearance in the discourse, or re-appears as a topic after an interval of reticence (Mansfield 2011). I propose that the alternation is somewhat invisible to textual analysis because it is a feature of speaker–addressee interaction; after asking many native MP speakers about the alternation, the only explicit explanation I received of the PRSNL form was “It means you can see it” (Notes, 2012-07-02). In many of my corpus examples PRSNL does indeed mark a referent that is visible to both speaker and addressee (ex.11.2.24); while in other cases the referent is not visible, but rather the speaker is assuring the listener that they could (or should) go and see it for themselves (11.2.25–26):

(11.2.24) [narrative of video being viewed by both speaker and addressee]

**kem**-ngintha-ngkabirr

3S.MOUTH.RR(21).PRSNL-DU.FEM-argue

*they are arguing*

**kam**-ngkabirr=**karrim**

3S.MOUTH(19).PRSNL-scold=STAND(3).PRSNL

*he's telling her off now* (MbM, VSE\_ 2-5-Heavy)

(11.2.25) [attesting physical evidence for a story he has just told]

berematha magim ini paip ini

still marker ANAPH pipe ANAPH

**karrim** pikit ini **karrim**

3S.STAND(3).PRSNLpicket ANAPH 3S.STAND(3).PRSNL

*the marker, the pipe is still standing, the picket is still standing*

(PIP, 2011-09-01\_02)

(11.2.26) [in response to a question as to where someone can be found]

ngarra da **kem**

LOC PLACE 3S.SIT(1).PRSNL

*he's at home*

(Notes, 2012-01)

If this interactive/epistemic function is the correct interpretation, it may be semantically related to the cognate Ngan'gi /g/ forms, which Reid (1990: 110) analyses as being:

remote from the speaker, either spatially distant or conceptually distant – activities or states that are in some way outside the speaker's immediate world, perhaps out of sight ... or perhaps beyond the speaker's firsthand knowledge ... motion or activity 'at a distance', often 'approaching from a distance'

Being “remote” seems somewhat opposed to the concept of “visibility” posited for the MP PRSNL; however both have an epistemic dimension, and there may be a common thread between the two in exhorting the addressee to see the referent, whether it is immediately visible, only just becoming visible, or whether the addressee may have to travel somewhere to see it. This may by extension amount to an assertion of existence, as in Street’s interpretation.

Quite aside from epistemic or interactional function, the MP PRSNL form seems to carry a stylistic or rhetorical weighting; in like-for-like, video-stimulated speech samples I elicited for “heavy” and “light” MP, among eligible verbs the PRSNL form appeared 51% of the time in heavy and 19% of the time in light varieties respectively (Mansfield 2011). Independently of this, an elderly speaker told me that she considered *kabim* 3S.LIE(2)PRSNL to be heavy in comparison to the lighter form *yibim* 3S.LIE(2).NFUT (Notes, 2012-01). I hypothesise that the uses of PRSNL can signal speaker authority, much as the archaic English *lo* is both presentational, and stylistically marked.

In contrast to the high-frequency use of PRSNL in elicited heavy speech, in MKK natural speech it is rarely used (though ex.11.2.22 above is one example). The PRSNL may be socially indexed to older people, though further focused research would be required to draw conclusions on its grammatical, interactional and sociolinguistic functions.

### **11.3 The role of telicity**

The NFUT classifier category is an underspecified tense, encoding either past or present readings depending on the *telicity* of the verb (N&C). For PST classifiers N&C claim that telicity has a different type of effect, whereby only Atelic (unbounded) verbs can be encoded directly with a PST classifier, while Telic (bounded) verbs cannot be encoded as PST unless some pluractional morpheme such as the serial verb is added (pp. 96–98, see Figure 11.3.1). In MKK the role of telicity in determining NFUT tense readings remains as it was in SMP. However

MKK exhibits a substantial number of the PST + Telic verb encodings that N&C describe as “ungrammatical”.

NFUT	+	Atelic	→	present
		Telic	→	past
PST	+	Atelic	→	past
		Telic	→	?past

**Figure 11.3.1 Outline of NFUT and pst interaction with telicity**

Serial verbs are used in MP to specify an imperfective viewpoint. This imperfective function interacts with the telicity of verbs, effectively converting Telic verbs into Atelics (N&C: 85). In describing this function I will argue, *contra* previous analyses, that the MP classifier categories are aspectually unspecified.

### 11.3.1 *Aktionsart, viewpoint and telicity*

In this section it will be important to distinguish two separate but highly interrelated phenomena: *Aktionsart* and *viewpoint*, which are sometimes also labelled “inner aspect” and “outer aspect” (Filip 2012). *Aktionsart* is a quality of the *situations* that verbs predicate, involving features such as dynamic/static, instantaneous/durative, and most importantly for MP, bounded/unbounded (more on this below). Viewpoint is not a quality of the situation itself, but rather how it is viewed temporally in relation to other situations, as part of a discursive information structure. Situations may be viewed from a *perfective* viewpoint, in which case they are complete episodes in themselves, or from an *imperfective* viewpoint, in which case they provide temporal framing within which other episodes occur (Comrie 1976). To give a very simple example, consider the following two sentences:

- (1) I built a house.
- (2) I was building a house.

In both sentences the same situation is predicated by the verb BUILD, and the Aktionsart of this situation is Dynamic, Durative and Telic (see below). But the two sentences differ in viewpoint, with the first being viewed perfectly as a complete episode, and the second imperfectly as the temporal framing within which other episodes might occur. Both Aktionsart and viewpoint are to do with *boundedness*, and for this reason they interact in most or all languages, including MP.

A core dimension of Aktionsart is *telicity*. A situation is Telic if it has a *natural point of completion*, thus verbs like BUILD something, BREAK something, DISAPPEAR and SIT DOWN are all Telic – it is inherent to the semantics of these verbs that the situations they denote come to an end (Garey 1957; Filip 2004). Conversely, a situation is Atelic if it could hypothetically go on forever, because it has no inherent point of completion: e.g. WALK, WORK, BE BROKEN, BE INVISIBLE and SIT. The Atelic category is cross-cut by a Dynamic/Static distinction, with the Dynamic type conventionally labelled Activities (e.g. WORK, SWIM, SPIN), and the static type States (BE INVISIBLE, BELIEVE something). Telic verbs are always Dynamic, but are cross-cut by a Durative/Instantaneous distinction, with the durative type labelled Accomplishments (BUILD something, FADE AWAY), and the instantaneous type Achievements (BREAK something, REALISE something, DISAPPEAR) (Vendler 1957).

The details of which verbal semantics count as having a “natural point of completion” need not be the same for all languages, nor is there complete agreement among theories of telicity (Filip 2004, 2012). N&C do not discuss the limits of the Telic category in MP, but there is certainly room for more research here, especially given that MP telicity can be directly diagnosed by testing the tense reading of NFUT encoded verbs. For example Semelfactive verbs, which are Instantaneous and Dynamic but do not involve any change of state (e.g. COUGH, BLINK) are variably treated as Telic/Atelic in different theoretical analyses (e.g. Smith 1997; Filip 2012); but the examples I have noted in MP appear to categorise them as Telic. I have also noticed that all verbs of perception, whether

they are Achievement verbs like SEE with a natural point of completion, or Activity verbs like WATCH with no intrinsic completion, function as Telic in MP.<sup>173</sup>

Note that it is the inherent telicity of the *verb* that determines MP TAM encoding, rather than the entire *predicate*. So a clause like “I walked around” patterns based on its inherently Atelic verb WALK; and a clause like “I walked to Darwin” patterns in the same way, since it has the same inherently Atelic verb, even though in this case the allative adjunct produces a Telic predicate.<sup>174</sup> This will be illustrated in examples below.

### 11.3.2 Telicity and the NFUT classifier category

When an NFUT classifier inflects a Atelic verb this yields a present tense reading (ex.11.3.1); but when it inflects a Telic verb this yields a past perfective reading (11.3.2) (N&C: 90–96).

(11.3.1) **wurran-nintha-lili**  
3S.GO(6).NFUT-DU.MASC-walk  
*they are walking* (Street 1996:208; cited N&C: 93)

(11.3.2) **mam-purl**  
1S.HANDS(8).NFUT-wash  
*I washed it* (Street 1996:208)

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<sup>173</sup> For evidence of Telic semelfactives see the examples using VC7 + *-rirda* “kick” in N&C (p. 95), or the verb VC8 + *-ngkawadha* “call someone’s name” in Street (2012). For evidence of Telic perception verbs that are in conceptually unbounded Activities, see the verbs VC28 + *-batj* “watch” and VC12 + *-yepup* “listen” in Street (2012).

<sup>174</sup> N&C do not address the question of predicates with telicity-altering adjuncts or arguments, though they do describe the TAM system in terms of “predicate” telicity (e.g. pp. 90, 95) rather than inherent verb telicity. In other words, for examples such as “I walked around” versus “I walked to Darwin”, it is not clear whether their telicity parameter refers just to the verb, or verb plus adjunct.



The encoding of Telic verbs like *-purl* “wash” in present tense requires the addition of an imperfective marker, as described below (§11.3.5).

Evidence that the grammar depends on the telicity of the verb, rather than the whole predicate, can be seen when the inherently Atelic *-lili* “walk” is embedded in a Telic predicate such as WALK TO DESTINATION. The resulting clause patterns with Atelic verbs in producing a present tense reading from a NFUT classifier. The following is an elicited example from a fairly bilingual speaker, who confirmed that this sentence can be used for a situation that is happening “right now”:

(11.3.3) **ngurran-lili**                      Dawun  
               3S.GO(6).NFUT-walk        Darwin  
               *I'm walking to Darwin*                      (MN, Notes 2013-11-21)

Conversely, a past tense WALK TO DESTINATION event must be expressed using the PST classifier, because of its Atelic verb, even though the whole predicate is Telic:

(11.3.4) **kunginire ngardi-lili-dha**        da    Dawun  
               yesterday    1S.BE(4).PST-walk-PST    PLACE Darwin  
               *yesterday I walked to Darwin*                      (MN, FN 2013-11-21)

### 11.3.3 Telicity and the PST classifier category

The PST classifier is used to encode past tense for Atelic verbs, but for Telic verbs N&C state that use of a PST classifier is ungrammatical unless there is also a serial verb, root reduplication or adverb added to produce a pluractional meaning (p. 96–98). It is certainly the case that NFUT is the more common encoding for past perfective tense with Telic verbs, as described above. However I have noted two examples in SMP archival data where SAY, which elsewhere appears to be Telic

in MP (i.e. is read as past even when encoded with NFUT),<sup>175</sup> is encoded with PST tense:

(11.3.5) da=ka      dji-wangu=wa    rut=yu  
 PLACE=TOP    DISTAL-DIR=EMPH road=TAG  
 pume-dha                      Ingkalitj-re-wangu  
 3PL.say(8).PST-PST      English-INSTR-DIR  
*“that way, that road”, they said in English*      (Blythe 2009-11-21)

(11.3.6) ma    me-ngarru-dha-kathu-ngime      nawa  
 but    3S.say(34)-1PC.IO-PST-HITH-PC.FEM      RIGHT?  
*but he said that to us, right?*      (Blythe 2011-07-30)

These examples raise the question of whether PST + Telic verbs in SMP are really “ungrammatical”, or just dispreferred. As we shall see below, PST + Telic encoding is quite well-attested in MKK, which further supports the hypothesis that it was used at least sometimes in SMP.

#### 11.3.4 NFUT and PST are aspectually unspecified

Most analyses of MP treat the classifier category that I label simply PST as being a past *imperfective* marker (N&C; Blythe 2009; Walsh 1976:213–4), and describe the NFUT + Atelic combination as encoding present *continuous*. I argue here that these classifier encodings in fact have no inherent aspectual viewpoint, a position more in agreement with Street (1996:208), who describes the PST classifier forms as encoding “perfective or imperfective”. My claim is that there is no aspectual viewpoint at all encoded in the PST or NFUT classifiers,<sup>176</sup> though their predominant use with (Atelic) Activity verbs means that PST is usually

<sup>175</sup> Though SAY may be Atelic in other languages; for example, the fact that its simple form can be used as a present tense in English can be taken as evidence that it is Atelic (Jane Simpson, *p.c.*).

<sup>176</sup> I do not address the question of whether FUT, FUTIRR and PSTIRR classifiers are aspectually specified, since these have no particular bearing on the grammar of telicity.

translated into English with the past imperfective “X was Ying”, and for NFUT + Atelic with the English present continuous “X is Ying”. This has led previous linguists to describe these structures as imperfective, overlooking the minority instances in which they are more naturally translated with English simple past or present tenses. Since the same MP encoding can serve both functions, we must conclude that these structures are simply unspecified for a viewpoint feature that in English must be specified.

Caudal and Nordlinger (2011) is a formal semantic analysis of counterfactuality in MP, which takes as one of its premises that the PST category is “past imperfective” – i.e. PST.IMPV in their analysis.<sup>177</sup> I do not propose to discuss the formal semantics of MP TAM here, but I note that my arguments about the general function of PST, if they are accepted as valid, cause problems for their analysis of aspect and counterfactuality.

NFUT + Atelic encodes present tense, and it is superfluous to specify aspectual viewpoint for this construction. The majority of Atelic verbs are Dynamic, that is to say Activities, and such verbs can only be expressed in present tense in English using an auxiliary continuous marker:

(11.3.7) **ngurran**-lili                      Dawun  
               3S.GO(6).NFUT-walk        Darwin  
               *I'm walking to Darwin*                      (= 11.3.3)

But NFUT + Atelic is also used for a smaller range of non-Dynamic verbs, that is to say States, which do not require any viewpoint marker when translated into English:

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<sup>177</sup> Caudal and Nordlinger (p. 8) also treat the past suffix *-dha* as being inherently imperfective. In my analysis it follows directly that if the PST classifier is unspecified for aspect, its accompanying *-dha* suffix is also unspecified.



auxiliary. For many such utterances the addition of the English imperfective does not render the translation *incorrect*, since it is not particularly clear in the narrative whether the utterance is being used as an episode in itself, or as framing for what comes after:

(11.3.12) [speaker previously states that he was on his own, then goes on to narrate his journey around town]

**ben**a-rduy      ngarra      risus=matha  
 1s.15.PST-circle    LOC      resource=EMPH  
*I just circled around / was just circling around* (DP, 2012-06-20\_25)

But there are some instances, especially where a temporal or sequential adjunct marks the completion of an episode, or the sentence completes a story, that the English past perfective provides a more natural translation:

(11.3.13) pipi    ngay Muwanyngu    kumparra  
 aunt 1s    [NAME]      first  
**wardarra**    **pur**ne-dha-ngime  
**already**      3PC.go(6).PST-PST-PAUC.FEM  
*the group including my aunt Muwanhngu **went (across) first***  
 (N&C: 97)<sup>178</sup>

(11.3.14) [final event in a narrative]

afrim=matha    **wurrini**-dha    damkardu ku-yu  
 upstream=EMPH    3S.go(6).PST-PST 2S.13-see    ANIM=TAG  
*he just **went** upstream, the creature*      (KM, 2012-06-20\_28)

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<sup>178</sup> N&C provide this as an example of PST encoding past perfective, which they argue occurs thanks to “pragmatic enrichment” (p. 97, fn30). However if we view PST as unspecified for tense, then all viewpoint readings are pragmatic, so that there is nothing special about this particular instance.

In summary, both NFUT + Atelic and PST are unspecified for viewpoint aspect, though their use with Atelic verbs, which are inherently unbounded situations, tends to associate them with imperfectivity. There is also a direct logical argument that the use of PST to encode past tense for Atelic verbs cannot be inherently imperfective: this is the only past tense encoding for such verbs, which as described above are present tense when encoded with NFUT. Therefore if PST + Atelic encoded past imperfective, it would mean that Atelic verbs simply could not be viewed from a perfective viewpoint in MP, which would render the concept of aspectual viewpoint quite meaningless for these verbs.

### 11.3.5 *The addition of the serial verb*

The addition of a serial verb either specifies an imperfective viewpoint, or coerces Aktionsart from a Telic event into a habitual or stative situation. PST-classifier verbs, which I have argued are unspecified for aspect, use the serial verb to specify an imperfective viewpoint – that is to say the temporal framing for some culminative event (ex. 11.3.15). Likewise FUT-classifier verbs can be encoded as imperfective framing by the addition of a serial verb (11.3.16):

(11.3.15) [Nemarluk threw the bodies of the Japanese in a hole, then...]

kura	lalingkin=matha	dani-wewu= <b>dini</b> -dha	
WATER	sea.water=EMPH	3S.POKE(19).PST-wave= <b>SIT(1)</b> .SER-PST	
	<i>the seawater <b>kept washing in there</b></i>		
nantji	pangu ngarra	kama pan-rte	pan-rtum
THING	DISTAL REL	INDEF 3S.ARRIVE(20)-stick	3S.ARRIVE(20)-dry
	<i>until (the sand) stuck and it dried out</i>		(PIP, 2011-09-01b_02)

(11.3.16) manitjpirr tjadjap ngama-nu  
 DUBIOUS invigorate 1S.DO(34)-FUT  
 mi ngurdi-wi-nu=**ngi** ini=matha ne  
 VEG 1S.TURN(29)-smoke-FUT=**SIT(1).SER** ANAPH=EMPH RIGHT?  
*I might be more lively **while I'm smoking** that cigarette*  
 (DP, 2012-07-15)

An example of an Aktionsart coercion can be seen in the following where *think* + DO(34), which alone can mean an Instantaneous “having a thought”, is encoded with a serial verb to specify a Durative state of belief (see also examples in §9.6.1):

(11.3.17) [speaker explains his previous misapprehension]

marrare think ngema=**ngardi**-dha mana-ngu landing  
 before think 1S.DO(34).PST=**BE(4).SER**-PSTDEDUCE-DIR landing  
*before I (thought / was thinking) the landing was over this way*  
 (PIP, 2011-09-01b\_02)

Most NFUT + Atelic verbs are Activities which translate into English as present continuous; however I also regard these as simply unspecified for viewpoint aspect in MP (see above), with the addition of a serial verb being used to specify imperfective viewpoint, though this doesn't tend to alter the English translation.

(11.3.18) ngunungam=warda  
 1S.FEET(7).NFUT=IMM  
*I'm going now* (N&C:77)

(11.3.19) mange ngay ngunungam=**ngem**  
 hand 1s 1S.FEET(7).NFUT=**SIT(1).SER**  
*I'm going by myself* (Walsh 1996:377; cited in N&C p. 86)

The selection of serial verb from one of the seven basic intransitive classes encodes further details regarding type of imperfectivity, and physical posture. These are briefly documented by Street (1996: 210) and N&C (pp. 88–89), and can be summarised as follows: Where SIT(1), LIE(2), STAND(3) or PERCH(5) is used as a serial verb, it encodes a continuous aspect, and adds further detail about the posture (sitting/lying/standing/aloft) of the subject. BE(4) as a serial encodes temporally generic or habitual aspect, while GO(6) can encode either continuous or habitual.

A more dramatic effect is produced when serial verbs are added to NFUT + Telic verbs. As described above, in simple form these verbs are read as past perfective;<sup>179</sup> but the addition of the serial verb both produces an imperfective viewpoint, and shifts the tense into the present:

(11.3.20) nungam-rirda

3S.FEET(7).NFUT-push

*he kicked him*

(N&C:95)

(11.3.21) nungam-rirda=**pirrim**

3S.FEET(7).NFUT-push=**STAND(3).SER**

*he's kicking him*

(N&C:95)

This reveals a connection between boundedness of an event type (telicity), and boundedness of viewpoint (grammatical aspect). When the Telic verb has the serial verb added to mark imperfective aspect, it loses its natural boundedness, which is reflected in the fact that it takes on the present tense reading of an Atelic event. This might be regarded as *coerced* Atelicity, in the same way that in English a naturally Telic verb like CATCH can become Atelic when combined

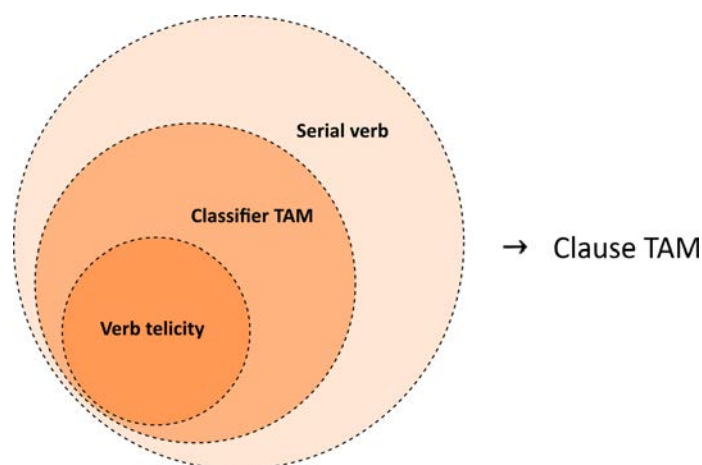
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<sup>179</sup> Note that this may be one case where a classifier has specific viewpoint on its own. I have not noted any instances where NFUT + Telic takes a discursive framing role, and I suspect that the addition of the serial verb is required for this.



with a mass-noun object: “he is catching *a fish*” (Telic) vs “he is catching *fish*” (Atelic) (Vendler 1957; Comrie 1976:45).

The layered encoding of TAM combining verb telicity, classifier category and serial verb is represented in Figure 11.3.2, while Table 11.3.1 shows the results of the various combinations for past and present verbs.



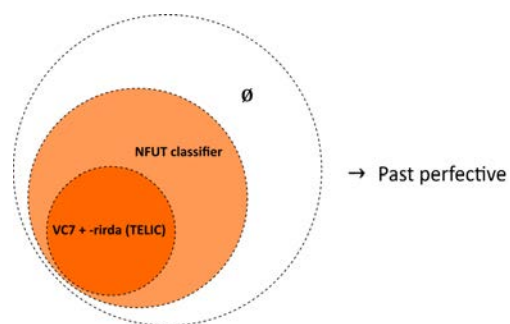
**Figure 11.3.1 Encoding of TAM**

	<b>TELIC</b>	<b>ATELIC</b>
<b>NFUT</b>	past perfective	present
<b>NFUT + serial</b>	present imperfective	present imperfective
<b>PST</b>	past ( <i>rare, see §11.3.6</i> )	past ( <i>common</i> )
<b>PST</b>	past imperfective	past imperfective

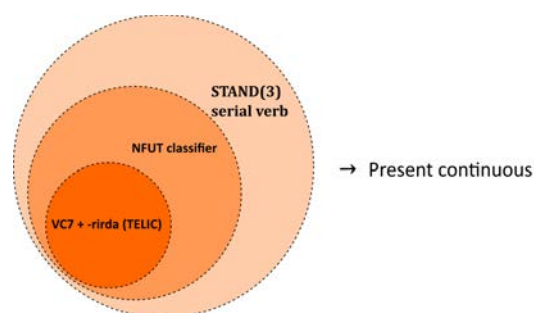
**Table 11.3.1 Interaction of classifier stem, telicity and serial verb**

The examples illustrated as 11.3.20–21 above, showing the effect of a serial verb on an NFUT + Telic verb, can be represented in terms of layering as in Figure 11.3.3.

nungam-rirda  
*he kicked him*



nungam-rirda=**pirrim**  
*he's kicking him*



**Figure 11.3.3 Effect of serial verb on TAM**

### 11.3.6 PST + Telic verbs in MKK

If there is any change underway in the telicity system of MP verbs, it is in the emergence of PST classifiers for marking Telic verbs – though I have noted above some doubts about the exact status of this structure in SMP. In MKK the NFUT classifier category remains the more common way of encoding Telic verbs as past tense; however there are also a substantial number of PST + Telic examples attested.

In the natural speech clause collection, out of some 100 verbs formed with the PST classifier, there are 37 that I interpret as Telic based on the principles described above (§11.3.1); and of these, 25 appear without a serial verb or any other pluractional marker – violating the constraint postulated by N&C (pp. 96–98). As described above, I do not regard these PST-marked verbs as being

specified for aspect. In some cases these verbs provide the framing for some other event, suggesting an imperfective viewpoint (ex. 11.5.1). In other cases the PST + Telic verb itself is inherently a complete episode, that would require some marked “interruption” to be viewed as imperfective (11.5.2–3):

(11.3.22) [speaker was surprised to find his brother awake late at night]

E__	kanyi	ngay ngurdam-na-rarlarl	
[NAME]	PROX	1s 1S.TURN(29)-3S.IO-laugh.RDP	
mi	lawam	<b>me-watha-dha</b>	pule=yu
VEG	damper	3S.DO(8).PST-make-PST	brother=TAG

*I laughed at E\_\_ ... he was making damper, my brother!*

(DP, 2012-07-15)

(11.3.23) [discussing an old boat hanging in the same room]

tjandungalla	kanyi=ka	ngalantharr	<b>me-watha=yu</b>
boat big	PROX=TOP	old.man	3.DO(8).PST-make=TAG

*did an old man build this big boat?* (WL, 201-06-02)

(11.3.24) pardi-yedjek                      puy                      **puddini-wurl**  
 3PL.BE(4).PST-play                      continue                      3PL.TURN(29).PST-go.back  
*they played, (then) went back home*                      (LP, 2012-06-20)

I note that some of these verbs (11.3.22–3) have classifier forms where PST is syncretic with PSTIRR, so there is a potential for reinterpretation as PSTIRR category foreclosed counterfactuals (§11.2.4). However there is nothing in the translations offered by my kigay collaborators to suggest counterfactuality in these instances, and indeed for ex.11.3.23 a counterfactual interpretation (\*“should an old man have built this boat?”) seems implausible. Furthermore, there are some examples (ex.11.3.24, 31–2 below) where the classifier is *distinctly* PST, and cannot be interpreted as PSTIRR.

In MKK careful speech data, the PST + Telic verb encoding without any pluractional marker appears to be dispreferred, though it still *can* be used. The picture-stimulated careful speech recordings do not contain any relevant data on this question, but the verb paradigm elicitations contain 13 complete or partial paradigms for Telic verbs (e.g. “gather”, “see”, “sharpen”, “cook”) with a PST classifier. Three quarters of these conjugations are produced with serial verbs added throughout. By contrast, in the PST + Atelic verb conjugations a serial verb is added to only a small proportion of verbs. This supports the claim that serial verbs are preferred for PST + Telic. But there are also two PST + Telic paradigms given without serial verbs (“swap”, “go back”), and two given with serial verbs only added to some person/number forms (“say”, “explain”). These show that PST + Telic verbs without serial verb can be produced, even in careful speech. We may infer that the serial verb in these structures is subject to the variable “absence” described in the last chapter (§10.6.2), but since it can occur without other suffixes present, these instances cannot be interpreted purely as an effect of “blocking”.

The use of PST to encode Telic verbs means that in MKK there are two grammatical structures available to produce the same TAM encoding, since NFUT + Telic also encodes past tense (§11.3.2). There is a difference in that PST + Telic verbs are aspectually unspecified (either perfective or imperfective), while NFUT + Telic only appears to encode a perfective viewpoint, but this still leaves plenty of overlap. It is worth considering whether there is some subtle difference between PST + Telic and NFUT+ Telic encodings that is not evident in terms of tense and aspect macro-categories. Comparing the two encodings as they are represented in the collated natural speech sample does not reveal any comprehensive or categorical distinction, though some broad tendencies may be evident. The NFUT encodings seem more likely to be *recent*, and to involve *discourse participants*; conversely the PST encodings are more likely to be *remote past* and involve *remote people*. I claim only that these are broad tendencies gleaned impressionistically from the data, and offer here a sample of five examples for each type (the first instances I found in the spreadsheet), from a total of about 40 relevant clauses in the sample:

**NFUT + Telic**

(11.3.25) [describing an event of many years ago]

wurdam-wal=warda                      bere=matha  
3S.TURN.RR(30)-jump.down=IMM    then=just  
kardu=ka                      **dim**-tharrmu-parl  
PERS=TOP                      3S.SIT(1).NFUT-tibia-break  
*he jumped down and his tibia just broke*                      (SL, 2012-06-12)

(11.3.26) [time-frame unclear]

**ngem**-purndurt                      fas-wan=matha waa ngamam  
1S.SIT(1).NFUT-awake    fast-ADJ=EMPH    aah    1S.say(34).NFUT  
*I woke up suddenly and shouted aaah!*                      (KM, 2012-6-20\_28)

(11.3.27) [remembering events earlier today]

**ngamam**-mpa=ka                      nyinyi=warda-ya  
1s.say(34).NFUT-2S.IO=TOP                      2S=IMM-TAG  
*I called out to you then*                      (DP, 2012-6-20\_25)

(11.3.28) kunginire=ka    dimu                      **nungam**-ngi-pirt  
yesterday=TOP    tooth                      3S.MOVE(7).NFUT-1S.DO-remove  
*yesterday I had a tooth out*                      (LP, 2012-06-30)

(11.3.29) edeleid    krou **nganam**-rdi                      arra kulbuy    wakal-re  
Adelaide    crow 1S.BE(4).NFUT-enter    REL    boy                      small-PERL  
*I joined the Adelaide Crows as a young boy*                      (LP, 2012-06-30)

Examples 26–28 all conform neatly to the posited pattern (INSTANT / RECENT / PERSON-PRESENT). Example 29 is not recent, and 25 is neither nor recent, nor does it involve anybody participating in the conversation.

### PST + Telic

(11.3.30) [time-frame unclear]

pardi-yedjek	puy	<b>puddini</b> -wurl
3PL.BE(4).PST-play	continue	3PL.TURN(29).PST-go.back
<i>they played, (then) went back home</i>		(= 11.3.24)

(11.3.31) penime      **pi**-ku-neme

3PC.MASC      3.STAND(3).PST-run.away-PC.MASC

ami      pi-ku-neme

army      3.STAND(3).PST-run.away- PC.MASC

*they ran away, the (Japanese) army ran away* (PIP, 2011-09-01b\_02)

(11.3.32) [Nimarlak escaping from prison]

tratjit	nantji	bamam	wakal	i
trousers	THING	white	small	and

tjingkelet	ma-nandji	tharra	<b>yu</b> -winhart
shirt	NEG-THING	run	3S.LIE(2).PST-run

*he ran off in small white shorts and no shirt* (PIP, 2011-01-01b\_02)

(11.3.33) da      karrim      kanyi      Bape-mup

PLACE      3S.STAND(3).PRES      PROX      [PLACE]-PPL

kanyi=nimin      **pume**-watha-nime

PROX=CONTR      3PC.HANDS(8).PST-make-PC.MASC

*the Bape mob from right here made this* (WL, 2012-06-02)



*variable* encodings that exhibit a *systematic quantitative* distinction involving several factors, including whether the event occurred today (more likely to be present perfect) or before today.

#### 11.4 Temporally generic clauses

“Temporally generic” clauses are those that assert the *general truth* of a situation – e.g. “violets flower in the spring”, “you can pick the lock with a fork” – rather than asserting it with respect to a certain time, either past, present or future. According to N&C temporally generic clauses are marked with NFUT + IMPF (i.e. a serial verb) when they have positive polarity (ex.11.4.1), but with FUTIRR (no IMPF required) when they have negative polarity (11.4.2):

(11.4.1) *thay yidiyi=ka wurdam-rurturt=wurran*  
*tree red.bush.apple=TOP 3S.TURN.RR(30).NFUT-grow.RDP=GO(6).SER*  
*da ngarra d unpungu manta*  
*TIME LOC jungle close*  
*the red bush apple tree grows in the jungle nearby (N&C: 89)*

(11.4.2) *kardu mere kurru-lili*  
*PERS NEG 3S.GO(6).FUTIRR-walk*  
*he can't walk (N&C: 104, citing Blythe)*

My MKK data, however, shows the IRR + IMPF being used for generic clauses of *either* polarity, while NFUT + IMPF is also used for positive generics. The IRR + IMPF encoding is not attested for SMP, though given that the topic is treated only briefly in N&C (and not at all elsewhere), it is possible that it is a well-established encoding that simply has not been documented. On the other hand, it may well be a new encoding in MKK that has somehow been facilitated by the almost complete merger of FUT and FUTIRR. The merged IRR category now encodes both positive and negative polarity for future tense, which with the addition of a temporally unbounded IMPF marker fits quite logically with temporally generic



assertions. That is to say, the unbounding IMPF indicates that the situation is not limited to any particular time, and the IRR indicates that it is not being posited as realised at any particular time.

Examples 11.4.3–6 show IRR + IMPF encoding positive-polarity, temporally generic clauses in MKK. Without serial verbs, the situations predicated in the first two examples might be interpreted as temporally specific – i.e. impending events (“which way will you go?”, “you’ll find bullet shells [and I suppose you are about to do so]”); but in these instances, with IMPF postposed, they clearly refer to generic possibilities. Example 11.4.5 might even be considered defective without IMPF, since the adverbial *enitaim* further specifies a temporal generality. Most of these examples have no tense suffix, but the future tense suffix *-nu* also seems permissible (11.4.6):

- (11.4.3) [general discussion of the place Nuthundu, though no one has plans to travel there]

ngarra=matha-wangu **thurru-tji**  
 where=EMPH-DIR      2s.go(6).IRR-SIT(1).IMPF  
*which way do you go?*      (DP, 2011-09-01)

- (11.4.4) [one speaker assures another that the army really were present in this location]

thungku      lit      shel      **da-rdurdurt-thurru**  
 FIRE      metal      shell      2s.14.IRR-find.RDP-GO(6).IMPF  
*you find bullet shells (around here)*      (DP, 2011-09-01)

(11.4.5) [speaker is arguing for the general autonomy of kardu kigay]

mi enitaim **thurdu-wi-tji**  
VEG any.time 2S.TURN(29).IRR-smoke-SIT(1).IMPF  
*you can smoke any time you like* (ED, 2011-09-17)

(11.4.6) [description of what it is like visiting a certain old man who is a famed story-teller]

matha **di-yepup-tji-nu**  
EMPH 2s.15.IRR-listen-SIT(1).IMPF-FUT  
*you just sit there listening* (DP, 2011-09-01)

The NFUT + IMPF generic encoding still persists in MKK, alongside the IRR + IMPF configuration (11.4.7–8). There may be some subtle modal difference between the two options, with NFUT clauses used more for third-person referents attributed lower agency, and IRR used for discourse participants (first- or second-person) with fuller agency – i.e. that which may or may not happen depending on inscrutable causalities, versus that which may or may not happen depending on agentive choice. But the distinction is not sharp, especially between examples such as 11.4.5 and 11.4.7.

(11.4.7) wurdan-wi=kanam?

3S.TURN(29).NFUT-smoke=BE(4).IMPF  
*does she smoke (ganja)?* (DP, 2012-07-15)

(11.4.8) pubam-watj=panam                      trak              kanyi=mana  
3pl.18.NFUT-fall=BE(4).IMPF              truck              PROX=DEDUCE  
*it must be where the trucks always fall over* (DP, 2011-09-01)

As mentioned above, negative-polarity, temporally generic clauses are also encoded with IRR + IMPF in MKK:

(11.4.9) kardu manangka nyinyi      **tha-ngi-yeyerr-thani**  
 PERS NEG                      2s                      2S.POKE(19).IRR-1S.DO-tell-**BE(4)**.IMPF  
*you can't tell me what to do*                      (ED, 2011-09-17)

(11.4.10) ngay=yu      ku                      mere                      **ba-ngkardu-ngani**  
 1s=TAG                      ANIM                      NEG                      1s.13.IRR-see-**BE(4)**.IMPF  
*I haven't seen the creature*                      (DP, *Ku fatha ngalla*)

The use of IRR + IMPF for generic tense effectively puts the configuration into “double-duty”, since along with temporally generic clauses, it also encodes future tense, perhaps specifying an imperfective viewpoint as attested in SMP (N+C: 99–100).

(11.4.11) kilingtaim      **nguyema-ngarni**  
 pass.time      1PC.DO(34).IRR-BE(4).IMPF  
*we'll (pass some time / be passing some time) here*  
 (PIP, 2011-09-01b\_02)

(11.4.12) tarangka      damatha      **thurru-tji**  
 clean                      emph                      **2s.go(6).IRR-SIT(1).IMPF**  
 kanyi=gathu-warra      tha-ruy  
 PROX=HITH-FIRST                      2S.APPEAR(20).IRR-arrive  
*you'll be clean<sup>180</sup> when you get there [if you travel to Old Mission by boat, being splashed by the waves]*                      (PtP, 2012-06-02)

## 11.5 Particles contributing to TAM

The core of MP TAM is encoded morphologically in the verb complex, but further details are specified in a range of modal particles. Most of these are attested in

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<sup>180</sup> Note that since this is a stative predicate, English does not permit grammatical imperfectivity (\**you'll be being clean*), but this example suggests that the same constraint does not apply in MP.

MKK, though a few may be obsolescent. But MKK adds two new particles borrowed from English/Kriol: *isi* ABLE (< easy) and *stil* PERSIST (< still). There is also an interesting case where an indigenous form *manitjpirr* DUBIOUS seems to converge both semantically and phonologically with the Aboriginal English “might be”.

The SMP modal particles are documented in Street (1996), and summarised in Table 11.5.1.

Particle	Meaning, GLOSS	Example(s)
<i>=nukun</i>	admonitive ADMON	mere=nukun thurru neg=ADMON 2SG.GO(6).FUTIRR <i>you better not go!</i>
<i>mere ngarra</i>	inabilitative UNABLE	mere ngarra me-watha-dha UNABLE 3SG.HANDS(8).PIMP-make-PST <i>he couldn't make it</i>
<i>mani</i>	intention TRY	ngay mani mam-watha ngem 1SG TRY 1SG.HANDS(8).NFUT-fix 1SG.SIT(1).NFUT <i>I'm trying to fix it</i>  nandji pana mani kathu tha-nga-mut-nu THING ANAPH TRY demand 2SG.POKE(19).FUT-110-give-FUT <i>can you give me that thing?</i>
<i>kama</i>	dubitative DUBIOUS	dim-dhutj kama <i>maybe he bathed</i>
<i>warda</i>	imminent IMM With Atelic + NFUT imminent aspect; with Telic + NFUT encodes resultative aspect; with PST indicates “almost happened”	nukunu-ka yibimpup warda <i>he's dead now</i>  ngurran warda <i>I'm going now</i>  mi wiye kanyi nguletjtha warda <i>I almost ate this bad food</i>
<i>deyida</i>	repetitive RPT	nukunu-ka bam-mardi deyida kardu mardinybuy <i>he's married a young girl again</i>
<i>warra (ngadha)</i>	sequential SEQ	mi kanyi warra ngadha ngurdankulk i ngulamaj warda <i>I soaked this food first then I ate it</i>
<i>wardarra</i>	“certative ... certainly completed” CERT	kardu pangkin wardarra ngarrini-ngkadhuk-tha <i>we were already sitting there on top</i>
<i>dangatha ~ ngatha</i>	yet / still STILL	mere dangatha ngani-murrk-tha <i>I haven't eaten yet</i>
<i>mana</i>	deductive DEDUCE	wurda mana <i>probably not</i>  ngamam mana-wa nanthi nyinyi kanyi-yu <i>I thought this thing was yours</i>

Particle	Meaning, GLOSS	Example(s)
<i>(ngatha)yida</i>	?abilitative “even X can” ? just/only (Street 2013 <i>p.c.</i> )	ngay ngathayida bamkardu ngem <i>even I can see him</i>
<i>weyida</i>	reason REASON	ku money weyida damngamut <i>because he gave me money</i>

Table 11.5.1 Murrinh Patha modal/aspectual particles (Street 1996:214–223)

All of these are well-attested in my MKK data except that only =*de* is attested rather than *deyida*, and *ngathayida*, *weyida* are unattested. This may of course simply show that they are rare; but it is also suggestive that the *-yida* element, for which no compositional meaning is evident, may have become obsolete.

### 11.5.1 *Stil*

The English-borrowed *stil* duplicates part of the functional range of the indigenous particle *dangatha~ngatha*. Walsh (1976) attests *ngatha* as marking conditional protasis in combination with FUTIRR (11.5.1), whereas Street (1996) attests *ngatha* functioning either for protasis, or to give an unfinished aspect to a verb – i.e. that which would typically be signalled in English by “still” or “not yet” (11.5.2).

- (11.5.1) nukunu-re kardu ngathan ngay ku-bat  
 3S.MASC-ERG PERS brother 1S 3S.23.FUTIRR-hit  
**ngatha** ngay=ka nukunu=wa ngu-bat  
 COND 1S=TOP 3Smasc=EMPH 1S.23.FUTIRR-hit  
*if he were to hit my brother, I would hit him* (Walsh 1976:247–248)

- (11.5.2) mere **dangatha** de-ruy-dha  
 NEG **still** 3S.APPEAR(20).PSTIRR-arrive-PST  
*he hasn't arrived as yet* (Street 2012: -ruy)

In my corpus I have not encountered any instance of *ngatha* being used for protasis, which instead is expressed by pairs of IRR clauses with no explicit connector:

(11.5.3) nyinyi      **da**-ngi-yelal-nu                      pewa      ngalla  
 2s                      2S.BASH(14).IRR-1S.DO-defeat-FUT      power      big  
 nyinyi      **nga**-mba-mut-nu                      mam-na                      ngawa  
 2s                      1S.POKE(19).IRR-2S.IO-give-FUT      3s.say(8)-3S.IO      RIGHT?  
*"if you defeat me" (said the Devil), "I will give you great power,"*  
*he told him*    (DP, 2011-09-01)

(11.5.4) nantji weyi      **kirra**=ka  
 THING hole                      3S.STAND(3).IRR=TOP  
**ka**-ngkap                      nantji      nyinda-re                      ngawa  
 3S.POKE(19).IRR-block      THING                      ANAPH-INSTR                      RIGHT?  
*if there's a hole, that stuff blocks it*                      (GbM, 2011-08-24)

However *ngatha* is still used frequently in MKK in the aspectual sense. The examples here permit us to extend the interpretation beyond situations that have not ended ("still", ex.11.5.5) or reached fruition ("yet", 11.5.6), but also those that have recently commenced ("already", 11.5.7). In summary, we might say that *ngatha* indicates the currency of an event – that it has already started, or not yet finished.

(11.5.5) kanyi tina ngalla      dangatha      karrim                      kanyi=yu  
 PROX sun big                      still                      3S.STAND(3).PRSNL                      PROX=TAG  
*there's still a lot of daylight*    (WL, 2012-06-02)

(11.5.6) kardu ma-kardu dangatha      dedi                      nekinime=yu  
 PERS NEG-PERS yet                      father                      1INCL.PC.MASC=TAG  
*our father wasn't born yet*    (LP, 2012-06-30)

(11.5.7) [at the beginning of a recording session]

nantji        on    dangatha

THING        on    already

*the thing (video camera) is already on*        (PIP, 2011-09-01a)

The borrowed *stil* covers part of the functional range of *ngatha*. In the examples I have collected *stil* is restricted to non-terminated situations that could indeed be expressed by the English “still”:

(11.5.8) da=ka        **stil** ngawa        pulampa-wangu tjutkat    na-na<sup>181</sup>

PLACE=TOP    still RIGHT?    [NAME]-DIR        shortcut 2S.GO(6).IRR.FUT

*it's still on the way to Palumpa, you take the shortcut?*

(DP, 2011-09-01b)

(11.5.9) aa        kardu=ka **stil** pandul        ngalla

ah        PERS=TOP    still many.people    big

kardu af    pangu        af    kanyi-thu dam-ngkardu

PERS few distal        few PROX-HITH 2S.13-see

*ah there was still a big group of people, some over there, some over here*

(ED, 2011-09-17)

(11.5.10) kardu=ka    **stil** purdu-na-wurl-neme

PERS=TOP    still 1INCL.TURN(29).IRR-3S.IO-return-PC.MASC

*we're still going to come back to him*        (PtP, 2012-06-02)

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<sup>181</sup> This example has *-nu* FUT subject to progressive vowel harmony. I have noticed the same effect in other instances, but do not address this or other vowel harmony effects in this thesis.

### 11.5.2 *Isi*

Another particle borrowed from English is *isi* (< easy), which has a modal effect indicating the possibility of a situation, much like the English “can”. In this case it is not clear whether or how the function is encoded by indigenous means in SMP. Street lists *ngathayida* as meaning “even X can...”, though my impression is that this is only one part of a more general “diminished importance” function. I am not aware of any indigenous structure that specifically indicates *able* or *potential* modality, though some irrealis verbs can be interpreted in this way (see below).

On my first encounters with *isi* it was not clear whether it should be interpreted as a modal indicating any degree of potential, or as an adverbial more specifically meaning “easily”. However the former interpretation generally fits the contexts more plausibly, and example 11.5.13, in which CK provides an English translation of ED’s MKK sentence, reinforces the modal reading.

(11.5.11) Nardirri-kathu tu Nganthawurdi  
Nadirri-HITHER to Nganthawurdi  
**isi** thama tjarndu tji-ku nawa  
**ABLE** 2S.DO(34).IRR boat 2S.SIT(1).IRR-go RIGHT?  
*from Nadirri to Nganthawurdi you can go by boat?* (DP, 2011-09-01b)

(11.5.12) nantji **isi** thurru-kulk ngarra kura=yu  
THING **ABLE** 2S.GO(6).IRR-submerge LOC water=TAG  
*you could launch it in the water* (Joshua, 2012-06-02)



(11.5.13)

ED: ku spidi=ka isi nyinyi=yu  
ANIM metal.band=TOP ABLE 2s=tag  
rikoding na-nga ma-na-nu  
record 2s.DO(8).IRR-1S.IO 1s.say(34).IRR-3S.IO-FUT  
*“can you record me some heavy metal?” I’ll say to him*

CK: can I Escape put me thama-na  
2s.say(34).IRR-3S.IO  
*say to him: “Can I Escape put me?”*<sup>182</sup> (2011-09-17)

In SMP a potential modality is one possible reading of the FUTIRR form, which can encode potential modality (may or may not happen depending on whether an agent decides to do the action, e.g. “you can go there by boat”, see §11.4), an epistemic hypothetical (may or may not happen depending on unpredictable natural forces, e.g. “the boat might sink”), or a deontic modality (desirable outcome that may or may not happen, e.g. “he should lend us his boat”). If SMP does indeed use a single encoding for all these irrealis modalities, then *isi* enables a new modal distinction, specifically *potential* or *able* modality, via the introduction (and semantic modification) of a borrowed form.

### 11.5.3 Manitjpirr ~ Matjpi

One final MKK TAM particle that is worth mentioning is *manitjpirr~matjpi*, which has a dubitative effect, though in many attested instances its function is quite mysterious (see also ex.11.3.16 above).

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<sup>182</sup> The mistake in the translation, “can I Escape put me?” for “can you put Escape for me?” illustrates a difficulty with the English system of verb arguments. I have noticed this is a common problem for kigay when they speak English (§4.5).

(11.5.14) **matjpi** bi-yepup-nukun watmam na  
**DUBIOUS** 3S.HEAR(16).IRR-hear-APPRHNS quiet RIGHT?  
*he might hear the silence* (DP, 2011-09-01b)

(11.5.15) ngay Tjaki **matjpi** kanyi-nimin nginipuny  
 1s [NAME] ?? PROX-CONTRS similar  
*me and Chucky (were) together over here* (DP, 2011-09-01b)

In many instances, the use of *manitjpirr~matjpi* is very similar to the indigenous MP particle *kama*:

(11.5.16) me-yegar!-nu **kama=ya**  
 3S.HANDS.RR(10).IRR-drop-FUT **DUBIOUS=TAG**  
*it might fall off* (DP, 2011-09-01b)

(11.5.17) ngarra kingtaid peneme mam-wirra-neme  
 LOC king.tide 3PC.MASC 1s.say(8)-3PL.IO-PC.MASC  
 kura klatj kama **matjpi** **kama** damatha=ya  
 water glass **DUBIOUS** **DUBIOUS** **DUBIOUS** EMPH=TAG  
*at king tide, I'm telling them, they have calm water, might be like that*  
 (PIP, 2011-09-01b)

*Manitjpirr* is an indigenous word (apparently a contraction of *mani + thatjpirr* TRY + PROPER, which I find semantically opaque), though in casual speech its phonetic form is approximately [mɛ̃ɪcpi], which makes it homophonous with the dubitative “might be” that is common in Aboriginal English. This may just be a coincidence, but nonetheless the semantic and phonological confluence of the forms produces an ambiguity as to whether the speaker is using an indigenous or borrowed form.

## 11.6 Summary

We have seen in this chapter that MKK collapses a three-way category distinction between FUT, FUTIRR and PSTIRR on verb classifiers, with the resulting single category given the label IRR. The PST category also shows incipient signs of merging with this unified category. To a large extent the loss of these distinctions on the classifier is absorbed by TAM information that is present elsewhere: on tense markers, adverbs, particles etc. But there does also appear to be some grammatical ambiguity between future indicative and hypothetical, deontic or imperative modalities in MKK.

On the other hand we have seen some addition of new TAM particles using English/Kriol borrowings, which in one case, *isi*, may permit a new modal specificity that was not available in SMP.

Together these facts show an incremental decrease in morphological complexity, and an increase in analytical marking of TAM. But the differences from SMP in this respect are gradient rather than radical. The verb paradigms documented for SMP show that these morphological mergers were already underway, and also remind us that SMP was itself not a stable, rigid grammatical system. We do not know what would constitute a “typical” or “normal” degree of change and variation in a morphological paradigm as complex as the MP verb classifiers, but it is clear that when reference grammars present these as determinate matrices, they do so only as a matter of convenience.

The appearance of PST-Telic verb encodings in MKK is more difficult to interpret, in part because it is unclear to what extent this is innovative, or whether it has simply been overlooked in the documentation of SMP. Further research will be required to establish the diachronic trajectory of this structure, and also to investigate what semantic, linguistic, social or stylistic factors may shape its synchronic usage in MKK.

## **Discussion: Murriny Kardu Kigay and linguistic urbanisation in northern Australia**

### **12.1 Introduction**

In this final chapter I contextualise my findings regarding Murrinh Patha youth language and culture, arguing that the phenomena I have documented are part of a wider northern Australian pattern that I label *linguistic urbanisation*. Settlement in towns over the last century has radically altered the sociolinguistic ecology of northern Australian languages, with major consequences for their structure. In some cases urbanisation has led to the emergence of Aboriginal youth subculture, which, like any subculture, is marked by a distinct way of speaking.

The youth speech varieties that have emerged in new northern Australian towns, including Murriny Kardu Kigay (MKK), are distinguished mainly by lexical and phonological means, while morphosyntax appears to have less of a role in producing sociolinguistic distinctions. On the level of morphosyntactic structure, some are characterised by mergers and the incremental reduction of complexity, but some “mixed languages” have also emerged in which a partly new morphosyntactic system is developed. In MKK some new structures have developed in the use of phrasal verbs, but this seems more a necessary facility for lexical borrowing than a mode of linguistic distinction in itself.

This thesis has been motivated by the presumption that the social situation of a speech community influences the types of language change that occur in that community. But language does not just reflect social changes, it also contributes to the reproduction of social structures. The findings in the previous chapters

have only tentatively begun to explore connections between the social situation and the language situation in Wadeye, but in this chapter I take more latitude in discussing the linguistic dimension of urbanisation in Wadeye, and in Aboriginal northern Australia more generally.

## 12.2 Sociolinguistic ecologies

In this chapter I discuss my findings on MKK with respect to the sociolinguistic ecology in which it has evolved, and with comparative discussion of sociolinguistic situations across northern Australia. I characterise the major recent change in these sociolinguistic ecologies as *linguistic urbanisation*.

But what is a “sociolinguistic ecology”?<sup>183</sup> A sociolinguistic ecology is the sum of, and the relationship between, a range of *different ways of speaking* available in a certain time and place. Different ways of speaking may be regarded as distinct languages, different dialects, or just different accents. Depending on the actual degree of difference, linguists may describe them as being distinct languages, or use a neutral term like “code” or “variety” that avoids the problem of language/dialect/accent altogether. There are also codes that linguists label “registers” or “styles”, referring not so much to differences between individuals as to different ways of speaking within the repertoire of the same individual. The scope of these terms is ambiguous, since a person’s “dialect” may be nothing more than the “style” that they use most often. I embrace all possibilities under the rubric “different ways of speaking”, and to maintain focus, ignore here the range of modal possibilities such as speaking and signing, writing and digital communication, etc.

The available ways of speaking are mapped in complex ways onto recognized social groups. The most basic such mapping takes the form “X-people talk the X-

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<sup>183</sup> The parameters discussed here are quite familiar to sociolinguistic theory (e.g. Hymes, 1974, p. 10), though the term “ecology”, which I find to be a useful metaphor, has gained less traction (but see Fill & Muhlhausler, 2001; Haugen, 1972; Mackey, 1980).

talk” (Fishman, 1977), though the reality is usually far messier. An additional dimension to the mapping is the range of social situations, activities, or types of interaction, often labelled “domains”, where certain ways of speaking may be deployed. This results in a mapping of the form “X-people talk the X-talk when they are doing X”. Finally, shaping the dynamics of how these ways of speaking co-exist are the *attitudes* or *ideologies* that locals have about them, including notions of who should speak how, and what indeed is recognised as a distinct form of speech.

In Chapter 4 I described the contemporary language ecology of Wadeye, noting that a multitude of Aboriginal languages have in recent decades given way to Murrinh Patha as the lingua franca, though in ideological terms it also has a sort of “official language” status. English and Kriol are both somewhat peripheral, and have quite different roles, in that the former is associated with whitefellas, and the latter with non-Wadeye Aboriginal people. The most important distinction for different ways of speaking MP is along a continuum from *murriny yittjit* “heavy” to *murriny parndurtparn* “light”, and at the very lightest end of the spectrum is *murriny kura* “water language”. The latter, rather elusive linguistic entity is a “slang” variety spoken by kardu kigay, and is one of the main foci of this chapter.

### **12.3 Bush language**

The sociolinguistic ecology of MP, and all other northern Australian languages, has undergone radical change in the last century – essentially because the social situation has changed radically, with Aboriginal people making the move from semi-nomadic hunter-gatherer life to settled town living. I here review what we know of sociolinguistic patterns in the earlier era, which I label “bush” society, much as MP speakers use *bush* or *putj* as metonyms for the pre-Mission era.

There is relatively little information available on the different ways of speaking that existed in the bush, but those distinctions that have been documented all

involve clan and land, kinship, gender and ritual knowledge. Differentiations reflect position within a gerontocratic hierarchy, and relationships between patrilineal groups. The topic can be divided into relations involving “social position”, i.e. *intra-clan* relations involving gender, kinship and age grades; and “hereditary identity”, i.e. *inter-clan* differentiations.

### 12.3.1 *Speech indexing social position*

Within clans, it is quite widely reported that initiated males had available to them a special register that was emblematic of this status. This was often marked by distinct lexical and semantic resources, including systematic antonymy with respect to the everyday register, and hypernyms of broad semantic scope (Dixon, 1980, pp. 65–8). Initiation registers might be used only during ceremony, only in “secret” among the men, or might have more generalized usage. The most famous initiand’s register is the Damin variety of Lardil (Hale, 1998; Hale & Nash, 1997), which includes a number of phonemes and even phonological features not used in the everyday register. In Yanyuwa (Bradley & Kirton, 1992; Bradley, 1998) there were distinct mens’ and women’s varieties, distinguished in a range of prefixes including noun classifiers:

(13.3.1)	wudanyuka	<b>ni-mi</b>	WOMEN’S SPEECH
	wudanyuka	<b>na-mi</b>	MEN’S SPEECH
	sea.turtle	<b>POSS.MASC-eye</b>	
	<i>the sea turtle’s eye</i>		(Bradley & Kirton, 1992, p. 47)

However the men’s variety was used only by *initiated* men, so that it can be seen as an initiation variety, but one that had fairly light formal differentiation, and a totally generalized domain of use. The stylistic repertoire of kigay very likely includes some features that index masculinity (cf. Kiesling, 2005), however I have abstained from attempting to analyse this, since speech data for young women is not yet available, and would provided a crucial comparison for this discussion.

Other intra-clan registers were not tied to the social position of the speaker, but rather depended on the kin relationship between speaker and addressee. The most common of these were a circumspect register to be used between a man and his mother-in-law, and a jocular register used in various kin relationships – for example between men in an uncle/nephew relationship (Dixon, 1980, pp. 58–64), or between women in a maternal grandmother/granddaughter relationship (Jane Simpson, *p.c.*).

### *12.3.2 Speech indexing heredity*

Various forms of linguistic differentiation are also used to mark speakers' clan heredity. In the Bininj Gunwok dialect chain, each patriclan has certain distinct lexical items and interjections (Garde, 2008). These are used in marked situations including formal requests, careful/self-conscious talk and matters relating to country and totems. Where a split is emerging within a clan, there may be separate marked interjections used by those associated with each side in the division; and where two clans have an especially close relationship they may share an interjection (p. 151). Similar “clan-lect” markers have been documented in Wik languages (Sutton 1979), Kugu Nganhcara (Smith & Johnson, 2000), Warumungu (Nash, 1990) and Yan-Nhangu (Bower, 2008), while in Yolngu varieties distinct word-final phonology and allomorphy marks both clan affiliation *and* patrimoiety (Wilkinson, 1991; cited in Evans, 2007, p. 352). In a similar vein, clan- or land-indexed code-switching has been documented in multilingual environments as a way of asserting rights to land and resources (Haviland, 1982, p. 64; McConvell, 1985).

### *12.3.3 Heavy and light language*

The way youth and non-MP people talk in Wadeye is described as *murriny parndurtparn* (“light language”), in opposition to the *murriny yittjit* (“heavy language”) of older MP people. This physical metaphor seems to be a way of



talking about language contact, vocabulary borrowing, and perhaps the phenomenon of linguistic urbanisation more generally – but there were also attributions of heavy/light qualities among bush languages. At Wadeye I have heard conflicting views as to whether the traditional Murriny Kura dialect was *yittjit* or *parndurtparn*, and similar disagreements over the relative qualities of the closely related Magati Ke and Marri Ngarr dialects (Notes, 2012-06).

A casual survey of the Australianist linguistic literature reveals that in bush language ecologies, physical metaphors such as heavy/light were widespread ways of talking about different ways of speaking. Neighbouring dialects connected to different clans and tracts of land have often been described to documentary linguists as heavy/light, or sometimes big/small, for instance in Gooniyandi (McGregor, 1990, p. 8), Ndjébbana (McKay, 2000, p. 159), Nyikina (Stokes, 1982, p. 1), Ngan’gi (Reid & McTaggart, 2008, p. 321), Wagiman (Wilson, 2001), Wik (Sutton, 1991, p. 56), and for Warlpiri, an opposition between “deep” and “tongue tip” varieties (Jane Simpson, *p.c.*).

There has been no systematic research into how emic heavy/light attributions may correlate to linguistic features, but there is some evidence that the levelling of paradigms – that is to say, the reduction of morphological complexity – is involved (§4.8.3). Nor is it altogether clear what sort of attitudes and conceptual networks these physical metaphors may connect to. I propose that this is an area where further research would be desirable – though much of the nuance of these matters is quickly disappearing, due to the urbanisation process.

#### **12.4 Urbanised language**

In town environments – especially the larger towns, Wadeye being the largest – the sociolinguistic ecology is quite different. Distinctions linked to clan and land have declined, and initiation varieties have been lost – though some kin-specific ways of speaking have been maintained. On the other hand the large number of young people growing up together in town has facilitated the emergence of

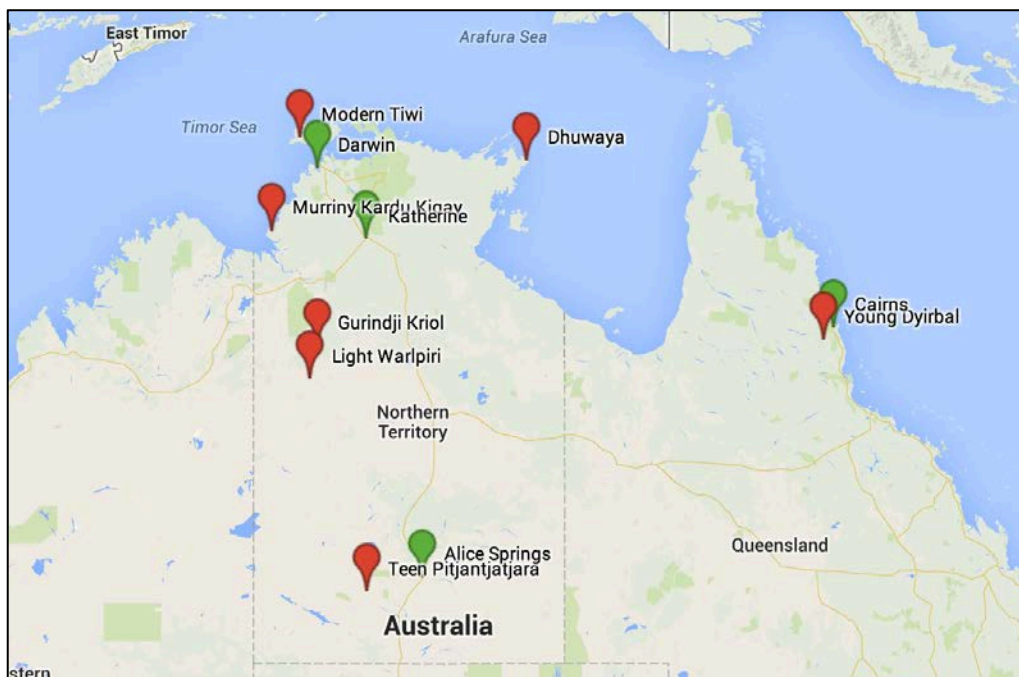
youth subculture, which produces its own new ways of speaking. I call this the “urbanisation” of language. Of course “urban” as an adjective tends to be associated with larger cities, rather than the towns of one or two thousand that have been created in the wake of missions and ration stations in northern Australia – but my point is to draw a connection between these and much larger cities in terms of sociolinguistic ecology.

Bush sociolinguistic structures are largely disappearing with the shift to town life. Kin-specific registers and initiation registers have mostly disappeared (e.g. in Dyrbal, Schmidt, 1991; in Lardil, Hale, 1998), while in more remote areas such as the Ngaanyatjarra lands they are still spoken to some extent, though transmission has become uneven (Inge Kral, Elizabeth Ellis, *p.c.*). In the larger towns of west Arnhem Land, Kunbarlanja and Maningrida, the Bininj Gun-wok clan-indexed interjections are in decline, and just one of these shibboleths is used by youth of all clans, apparently for humorous effect (Garde, 2008, p. 165). As I have argued in this thesis (§3.9), the power of clan-and-land based social structures must almost inevitably wane once peoples’ residence, social lives and sources of subsistence are in town rather than the bush. From this point of view we should expect that the associated sociolinguistic structures should also lose their currency.

In Wadeye, “town culture” is taking the place of bush culture. People still discuss, debate (and even fight over) their connections to traditional tracts of land, but their more immediate everyday concern is with areas of town, residential housing, and access to shop-bought goods, especially food, drink and tobacco. Hunter-gatherer economics has largely given way to a welfare-and-kinship economics (§2.3). Young people who have grown up in this environment, especially after the end of the Mission in 1975, have developed an elaborate “metal mobs” subculture that focuses on the representation of lateral kin relationships. The metal-mob subculture offers ways of representing conflict and group solidarity, chaos and rebellion, and ambivalence about Aboriginality, whitefellas and the outside world (§3.8).

It is not surprising that in this social context, bush language has given way to urbanized language. The several languages and dialects of the Daly region have converged on a single language, Murrinh Patha. Clan lects such as “Murriny Diminin” and “Murriny Nangu”, reported by linguists who work with the oldest speakers, are never mentioned by kardu kigay. But a new way of speaking has emerged in the youth style of language, which cannot be linked clearly to any clan/land relationship, but instead indexes generational consciousness, rebellion against authority, and an ambivalent gravitation towards the “cool” factor of cosmopolitan networks. Language does not just reflect these social changes, but contributes to their realisation. Ways of speaking are one of the key practices that Wadeye youth draw upon to be urban, and to identify themselves as a “new generation” (Mesthrie, Swann, Deumert, & Leap, 2000, p. 316).

The subcultural or youth-indexed dimension of town language has not been extensively documented in other Aboriginal towns, but I hypothesise that broadly similar dynamics play a role in many locations. I discuss here how *linguistic urbanisation* can be read into various examples from the Australianist literature, as well as mentioning some comparable situations in Africa.



**Figure 12.4.1 (In red) urban/young language varieties documented in northern Australia; (in green) major urban centres.**

#### 12.4.1 Convergence on a town language

Convergence on a town language may involve anything from a few lexical changes to large-scale language shift (McConvell, 2008). I have mentioned above the decline of Bininj Gun-wok clan interjections, which may be regarded as one of the more minor forms of convergence. In towns of Britain and the United States, where dialect geography is far better documented, it has been possible to study in detail the convergence of phonological features as a product of urbanisation (Trudgill, 1986; Kerswill & Williams, 2000; Durian, 2007; Cheshire, Kerswill, Fox, & Torgersen, 2011), while with far less historical data to draw upon, similar phonological convergence has nonetheless been found in an Inuit town (Clarke, 2009). Meanwhile the Wadeye case is a fairly major convergence, with speakers of three distinct languages and seven dialects (depending on how you count) converging onto one. There are other cases where the emergent town language is not any of the languages indigenous to the area, but rather a creole or a creole/indigenous mixed language.

At Yirrkala in east Arnhem Land, a town *koine*, that is to say a sort of compromise dialect that cannot be equated with any of its source dialects, has emerged from Yolngu varieties (Amery, 1985). The new dialect is known as Dhuwaya, reflecting its major source in the set of moiety dialects collectively known as Dhuwala (see also Wilkinson 1991), and the lenition  $l \rightarrow y$ , which is characteristic of Dhuwaya phonology. There is also bilabial obstruent lenition, and the word-initial deletion of /ŋ/ and /w/ (Amery, 1985, pp. 41–45). Pronoun, demonstrative and verb conjugation paradigms are regularized and simplified, and English lexicon is heavily borrowed (pp. 79–91, 114). These linguistic features are all rather similar to those found in MKK (§12.5).

Dhuwaya emerged in a situation where politically autonomous (and sometimes competitive) clans were adapting to a shared town space, where previously they had each had their own territory (pp. 178–181). Older people still see themselves

as fundamentally identified with clan and land, and therefore use their clan lects in meetings, church services and other “official” public situations. But Dhuwaya dominates in more casual or intimate domains, so that the relationship between Dhuwaya and the clan lects can be characterized as diglossic (pp. 132-136). This makes Dhuwaya the “low” way of speaking, but Amery reports that it is actively embraced by young people, for whom it represents “solidarity within the peer group” (p. 128). This suggests that young people who have grown up in Yirrkala identify primarily with town residence and have some awareness of themselves as a “new generation”, with clan heritage taking a secondary role.

The social dynamics of Dhuwaya bear strong similarities to MKK. In both cases multiple language groups have been brought together by settlement, and the generations born and raised there have settled on a lingua franca. In the case of MKK, one particular language that has a clear geographic claim on the settlement has become the lingua franca (§4.2); in the case of Dhuwaya a more compromised solution has been reached, though the new dialect is to some extent identified with the traditional Gumatj dialect, which has a controversial claim to the site of Yirrkala (Amery, 1985, pp. 7–24). Both Dhuwaya and MKK can be described as linguistic *urbanisation*: the reconfiguration of sociolinguistic dynamics as a result of speakers taking up settled, urban residence.

#### *12.4.2 Town, youth and cosmopolitanism*

What is it about town living that drives youth to find their own way of speaking? I have argued in this thesis (§3.2) that demography is a factor: in bush camps there would not have been more than a dozen or so young Aboriginal men living together in the same group, and I believe that this would have given less scope for producing an in-group code and in-group identity than the presence of hundreds of young men who find themselves living together in a town like Wadeye. But urbanisation is not just about demographics; it is also about what youth find *meaningful* in the town environment, and how this comes to stand in opposition to bush culture. The artefacts of town life I have in mind are the usual

suspects: consumer goods and mass-mediated images. I certainly do not subscribe to the theory that these cause the “corruption” or “loss” of language and culture,<sup>184</sup> but in Wadeye these cosmopolitan artefacts clearly capture youth’s imagination (§3.8.1, cf. Stanner, 1959). Youth are the most receptive audience for cultural diffusion, and the long-distance connections offered by consumer goods and mass media offer the most concentrated form of such diffusion. On the other hand we have seen that Wadeye youth feel themselves to be quite distant from the greater Australian urban networks: their life is no longer in the bush, but neither has it taken on all the key economic and institutional aspects of urban, capitalist society. Their world might even be said to have some of the “liminal” character that Rampton (1995, p. 193) identifies as a fertile context for young people to appropriate linguistic material from other groups.

The “Short Way” Pitjantjatjara spoken by teenagers in Areyonga (Langlois, 2004, 2006) is another example of urbanized Aboriginal youth making their own codes. In this case there has not been a substantial convergence of separate language groups, but rather a small ex-ration station populated almost entirely by Pitjantjatjara people. Indeed, the “urban” status is much more marginal here, with the population numbering only about 200 people – though I note that Areyonga has a very good road connection to the urban centre of Alice Springs compared to many other remote communities. In the brief social description Langlois provides for Areyonga, the town is portrayed as more harmonious than Wadeye, and having more positively embraced mainstream Australian institutions. It is reported that school attendance is “quite high” (p. 7), and I would expect this to be reflected in higher levels of English competence than are found among kigay, though Langlois does not report explicitly on this topic. Langlois claims that the use of illegal intoxicants is “practically unknown” (p. 12), and in comparing her own study to the work of Eckert (1988), in which

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<sup>184</sup> Among an earlier wave of studies of language death and endangerment, it was commonplace to blame language shift on the influence of television (Krauss, 1992; Jennifer Lee, 1987, p. 352; Schmidt, 1991, p. 117). However I am not aware of any substantial evidence for this claim.

youthspeak is shown to be associated with the desire for independence from one's family, Langlois argues that this sort of generational tension is not substantially present at Areyonga (p. 162). But she also describes the teenagers' fascination with movies and American basketball stars (pp. 11, 175–9), and one boy in particular who likes to quote from *The Terminator*, "I'll be back".

The Short Way language (pp. 160–8) is an in-group register that is used only by teenagers, and is disparaged by older adults to whom it may not be intelligible. I compare its linguistic features to MKK in §13.5. As Langlois notes, the use of Short Way, which is generally restricted to just a couple of teenage-only settings in the town, does suggest some degree of subversive youth culture. There is a clearer linguistic stratification here, with Pitjantjatjara and Short Way quite formally distinct (see below), and also a clear sociolinguistic distinction in that Short Way has a delimited domain of usage. Short Way is spoken just among the few dozen teenagers living at Areyonga, and usually just during evenings at the basketball court (p. 160). By contrast, the metal mobs culture of Wadeye is pervasive in most aspects of kigay's lives, and is carried with them everywhere as a badge of identity.

On a much larger scale, in sub-Saharan Africa the first generations of youth growing up in newly developed cities have quickly established their own ways of speaking. Here urbanisation has proceeded very rapidly over the last 50–100 years in regions where the population was previously rural, creating cities numbering hundreds of thousands in population. The new town varieties are characterized by extensive lexical borrowing and other contact effects. A wide range of urban codes are labelled Tsotsitaal or Iscamtho, using either Afrikaans or Bantu languages as a base, but in all cases liberally mixing vocabulary from other sources (Aycard, 2007; E. Hurst, 2009). Very similar linguistic and social characteristics are found in Town Bemba (Zambia, Bantu/English: Spitulnik, 1999) and Sheng (Tanzania, Swahili: Githinji, 2006). The following expressions are recorded from a youth-oriented radio program in Zambia (morphological glosses are not provided):

(12.4.1) namu-**get**-a  
*do you get me?*

bali-**lod**-wa  
*they are loaded (i.e. rich)*

ndi fye **spakajez**  
*I'm great! [lit. I'm "spark-a-jazz"]* (Spitulnik, 1999, p. 47)

A 32-year-old urbanite from Lusaka explains (in English) the motivation for speaking Town Bemba, as opposed to the more conservative rural variety:

This guy is backward from the village. This guy in town is *on*. And he really wants to be *switched on*. In English, he wants to "*yeah, yeah*." You know, that kind of thing ... In Bemba, he really wants to, you know, be *on*.

(Spitulnik, 1999, p. 41, italics in original)

The literature on these new urban varieties generally takes a more ethnographic approach than the comparable Australian studies, with less analysis of grammatical structure, but more detailed description of how the new languages are used by youth to define themselves as urban, and in opposition to traditional, rural society. In this thesis I have ventured into a middle ground between ethnographic and grammatical research, aiming to lay foundations for further analysis of how the two are connected.

#### *12.4.3 Shifts towards a cosmopolitan language*

In fact the most common outcome of town settlement across northern Australia has been the abandonment of bush languages in favour of English or Kriol, though there are also some fascinating cases where a middle-path has been taken by developing a *mixed language* that combines elements of the local language with elements of Kriol.



Harris and Sandefur (1985) argue that Kriol emerged essentially as an accommodation measure at Ngukurr (Roper River), where many language groups were suddenly brought together, and did not have any common means of communication. Later Kriol may have developed a social function as an in-group Aboriginal identifier, though this has not been extensively researched (but see Rhydwen, 1995).

Of more interest to the current discussion are the mixed language cases, where there has been less communicative compulsion to make Kriol the town language, but nonetheless the local language has been substantially mixed with Kriol. The two best documented instances are Gurindji Kriol (McConvell & Meakins, 2004) and Light Warlpiri (O'Shannessy, 2005). These have emerged in two medium-sized, fairly remote Aboriginal communities, Kalkarindji and Lajamanu respectively, both in the sparsely populated country south-west of Katherine, some 500km from this commercial centre and with populations around 500 people each (Meakins & O'Shannessy, 2012, p. 223). The region where these new languages have emerged has a liminal position between an area where children still grow up speaking traditional languages to the south (Warlpiri and Western Desert varieties), and the "Kriol belt" to the north. During the mid-twentieth century many Aboriginal people of this region worked on cattle stations, including Wave Hill Station on Gurindji land, where they mixed with workers speaking English, Kriol and other Aboriginal languages.

Warlpiri and Gurindji are typologically quite similar, and the linguistic structure of the two mixed languages is also similar. In each case Kriol provides the verbal matrix of the clause (i.e. TAM, pronouns and word order), while Gurindji/Warlpiri provides nominal morphology and lexicon (McConvell & Meakins, 2004; O'Shannessy, 2005). Gurindji Kriol in addition takes much of its verbal lexicon from Gurindji in the form of uninflecting coverbs:

(13.2.3) warlaku-ngku    *i bin* katurl    karu *leg-ta*  
 GK            dog-ERG                    3S PST bite            child leg-LOC  
                   *the dog bit the child on the leg* (Meakins & O’Shannessy, 2012, p. 218)

Light Warlpiri does not use many Warlpiri verbs, but its Kriol-lexified TAM markers are re-analysed and restructured under the influence of Warlpiri TAM auxiliaries, resulting in a hybrid grammatical structure that cannot be sourced exclusively in either input language (O’Shannessy, 2013).

The two languages have emerged out of situations where code-switching between Kriol and Gurindji/Warlpiri was pervasive. Both Meakins (2014, p. 392) and O’Shannessy (2013, p. 348) claim that the pervasive code-switching that gave rise to mixed languages was not required by communicative accommodation – i.e. the need for disparate groups to find a shared language – but rather was motivated by the social functions made available by the mixed way of talking. McConvell (1985) provides a first-hand report of the situation one generation earlier, when code-switching was used to reference distinct social domains, with Kriol indexing the domain of paid work, and the wider Aboriginal social network encountered on cattle stations. McConvell’s is one of the most insightful analyses published for any Aboriginal sociolinguistic ecology, however I am not altogether convinced by Meakins and O’Shannessy’s claim that communicative accommodation had no role to play in motivating pervasive code-switching. If a Gurindji-speaking community had no communicative needs not met by Gurindji, but Kriol had taken on a value as an index of cosmopolitan and urban life, we might expect this identification to be realized by lexical insertions, but not by a switch to Kriol-matrix sentences. This is the pattern found in MKK, in Teenage Pitjantjatjara, and in Tsotsitaal, Sheng and Town Bemba. However there were a certain number of non-Gurindji people living at Kalkarindji in this period, and though they acquired some Gurindji, they would have been more comfortable using a mixed code (McConvell, *p.c.*). I hypothesise that these speakers may have led the way in using more extensive Kriol in mixed sentences, including more Kriol-matrix clauses. Gurindji people who had the

most extensive outside networks, the fanciest cowboy shirts, and were most fluent in Kriol might have paraded their status by joining in this style of speech.

Although Gurindji Kriol and Light Warlpiri are formally similar, and both have their genesis in code-switching, they appear to have different sociolinguistic roles. Traditional Gurindji is no longer acquired by children (Meakins & O’Shannessy, 2012, p. 226), so that Gurindji Kriol is effectively replacing it. The new mixed variety is emically labeled simply “Gurindji” (McConvell & Meakins, 2004, p. 13), suggesting that the sociolinguistic contrast of the two codes may not be very salient. But Light Warlpiri exists alongside Warlpiri, which is still spoken both as a second language by children growing up in Lajamanu (O’Shannessy, 2005, p. 32; 2011, p. 137), and as the first language of children growing up in Yuendumu and other communities to the south. Warlpiri speakers label the mixed language *Warlpiri rampaku*, translatable as “light” or “weak” Warlpiri (O’Shannessy, 2011, p. 135). Gurindji Kriol speakers use the new variety when addressing older people (McConvell & Meakins, 2004, p. 12), whereas Light Warlpiri speakers may switch to Warlpiri to address their elders, while the new mixed language to some extent functions as an in-group code among young people (O’Shannessy, 2011, p. 137).

### **12.5 Youth style and language change in MKK**

In this section I summarise my findings on MKK, considering how they relate to youth identity marking, language change, language contact, and comparing them to research on other town languages in northern Australia.

It is worth reiterating that under the label Murriny Kardu Kigay I include all MP spoken by kardu kigay (young men, see §2.2), ranging from its most standard to its most innovative variants. I focus on divergences that I have noted from SMP, but these can include currents of grammatical change that have no social meaning, “slang” ways of speaking that are highly socially marked, and probably some ways of speaking that are both socially marked and part of ongoing

changes. The most slang form is referred to as Murriny Kura “water language” among native speakers, though this label is also the label for a particular bush dialect distinct from the MP spoken in the Wadeye area (§4.4). A clustering of the innovative features documented in this thesis probably constitutes what people label Murriny Kura, though my attempts to study what people perceive as Murriny Kura have been largely unsuccessful so far.

As mentioned in the introduction, the previous studies that are most comparable to my own are Langlois’ (2004) study of teenage Pitjantjatjara speakers in Areyonga, and Amery’s (1985) study of the Dhuwaya town koine. Each of these documents how young people speak a traditional Aboriginal language at a certain place and time, and describes ways in which this diverges from the “standard”. On the other hand both these studies are structured differently from mine in that they are more complete catalogues of phonological and morphosyntactic elements, but with less ethnographic investigation and no quantitative analysis of variation. Similar to these is another historic slice of Aboriginal youth language, “Modern Tiwi” (Jennifer Lee, 1987), though in this case the language is undergoing much more radical change into what can be regarded as another Kriol-mixed language (Meakins, 2014).

### *12.5.1 Lexical borrowing and imported phonology*

In Chapter 6 we saw that kigay borrow a large amount of English/Kriol lexicon, amounting to some 20–35% of content words – a much higher level than that found in the conversational speech of elderly women. Some of the borrowings are accounted for by cultural borrowings, where the word has been adopted along with the technology or practice that it labels, but others are “gratuitous” borrowings where, on some level, a choice has been made to use a foreign word instead of the existing MP expression. I interpret these borrowings as a means of distinguishing a young, urban way of speaking.

As we saw in Chapter 4, many kigay do not have much confidence or competence in English, and neither do they have much social engagement with whitefellas. Their use of English/Kriol lexicon does not reflect linguistic or cultural contact with mainstream Australia, or at least not in the sense of face-to-face, social interaction. Rather, it reflects a *mediated* engagement with national and global cultural artefacts discoverable on television, CDs, and increasingly via mobile phones (§3.5, cf. Sayers, 2014). I have noted that kigay show interest in media forms that do not involve extensive dialogue or other textual content. But from the media they do follow – heavy metal, action movies, AFL football – they clearly do acquire vocabulary. For example, kigay were able to inform me that their core subcultural term *ku spidi*, meaning the heavy metal band one affiliates to as a group or private totem, derives from the subgenre label “speed metal”, showing that this quite specialized term was at some point acquired, before being given a local semantic twist. There are many other cases of borrowed vocabulary being semantically modified to create in-group terms that belong neither to traditional MP, nor to whitefellas, but to the kigay. For example kigay often say *ku yelawan ANIM* + yellow “fifty dollar note” (referencing the colour of the bill), as opposed to the unmarked term *ku fifti*, when discussing the price of a marijuana deal in Wadeye. Or *frikinet* (< “freaking out”), is used to describe someone as being “very stoned”.

The vocabulary borrowed into MKK may reflect Kriol sources to some extent, rather than English, although for the most part I have found no way of distinguishing sources apart from where there are obvious clues like the Kriol transitive suffix on *bayim* (< “buy”). To the extent that some borrowings are from wider Aboriginal networks of Kriol speakers, these *do* reflect actual social engagement, rather than mediated cultural/linguistic diffusion. For the moment we might suppose that MKK borrowings reflect a mixture of the two types of cultural engagement – both results of urbanisation – and hope that further research will shed more light on the wider social networks in which kigay engage. A detailed understanding of how social networks and media engagement interact in diffusing cultural and linguistic material to Wadeye would make a

valuable contribution to the flourishing debate on the role of media in language change (Sayers, 2014).

The blend of borrowings and foreign-sourced coinages found in MKK is typical of other urbanized youth varieties, especially the African town languages mentioned above. But there are other situations where youth may use local Aboriginal vocabulary with a subcultural tinge. These are the cases where English has become the accepted, consensual language of the town where they grow up, so that words from the bush language of their forebears take on an oppositional value. For example, the sociolinguistic function of English/Dyirbal vocabulary used by Young Dyirbal (Schmidt, 1985a, 1985b) speakers seems to be the inverse of MKK. Young Dyirbal (YD) speakers are fluent in (Aboriginal) English, and live in a town of mixed population where English is the main language. There is a large difference in the amount of Dyirbal lexicon used in two YD speaker groups: the “Buckaroos”, a group of four young women who all work or attend school, use Dyirbal lexicon for 47% of the word tokens in their YD speech; the “Rock’n’Rollers”, a group of three who are all unemployed, use 90% Dyirbal lexicon (pp. 128-141). It appears that the Rock’n’Rollers use a more distinctly Dyirbal lexicon for their in-group speech as a symbol of their detachment from whitefella institutions.

One way to summarise the two situations would be to say that urban youth seek their in-group vocabulary in whatever is *not* the standard language of the town they grow up in (Kerswill & Williams, 2000, p. 86). A similar sociolinguistic dynamic may apply in Teenage Pitjantjatjara, where a large amount of lexical borrowing is also reported. As with MKK, the adaptation or importation of phonological material in these borrowings is variable from speaker-to-speaker and token-to-token, though there is a clear pattern of fricatives being imported (Langlois, 2004, pp. 41–43). As Langlois notes, further investigation of factors influencing this phonological variation may give us deeper insight into the social meaning of borrowed vocabulary in these youth varieties.

### 12.5.2 Peripheral obstruent lenition

The second dimension in which kigay mark their speech as distinctive is phonology, where various lenition patterns are deployed, but I have chosen to focus in particular on the lenition of peripheral voiceless obstruents, /p/ and /k/, in the onset of stressed syllables. I have shown in Chapter 7 that this lenition pattern, which does exist in older people's speech, and has a salient role in Australian historical phonologies in general, is used much more frequently by kigay both in careful and natural speech.

(12.5.1) kampa panamka-**k**ampa-nime → [k<sup>h</sup>amba ,βanamyɑ'uɥambaŋim]  
laugh 3PL.BE(4)-laugh-PC.NIME  
*they're laughing* (SM, PSE)

I hypothesise that lenition has at least some role as a youth identity marker in MKK, though it is impossible given the current data to determine how much of the difference between standard MP (SMP) and MKK is a matter of youth-indexed stylistics, and how much is phonological change-in-progress. To decide this we will need diachronic data showing whether rates of phonetic lenition advance with subsequent generations, and to what extent the lenited forms become “phonologised” to supplant the older forms.

Again there are strong social and linguistic parallels with the other urban youth varieties of northern Australia. The Dhuwaya town koine is also characterized by various lenitions, including bilabial obstruent lenition, and the word-initial deletion of /ŋ/ and /w/ (Amery, 1985, pp. 41–45). The Short Way in-group style of Teen Pitjantjatjara is primarily marked by the deletion of the initial syllable from each word (Langlois, 2004, pp. 162–166). Pitjantjatjara has first-syllable primary stress on all words, and in Short Way this pattern is maintained by moving the stress onto what would have otherwise been the second syllable:







(12.5.6) krapa-**ri**-ngu-rna  
 TP        cramp-**INCH**-PST-1S.NOM  
*I felt cramped*

(12.5.7) ka     ringi-**ma**-rnu             kutjapa-nta-ngku  
 TP        CONTR phone-**TRANS**-PST     another-EMPH-ERG  
*another person rang him*                             (Langlois, 2004, pp. 65–72)

Modern Tiwi (Jennifer Lee, 1987) is perhaps more closely comparable to MKK in verb borrowing, since Tiwi has a polysynthetic verb with an even richer array of morphology than MP. Modern Tiwi is a slice of language change documented in 1978–9 on Bathurst Island, and as mentioned above, has turned out to be a snapshot of what is fast evolving to become a mixed Tiwi/Kriol language (P. Hurst, Wigglesworth, & Wilson, 2014). One symptom of this is that the polysynthetic verb has been largely abandoned, and where it is used in youth speech, does not deploy most of the morphological possibilities of the traditional language.

Traditional Tiwi uses a very complex polysynthetic verb structure as its main form of predication, though a CV + IV structure is also available for a few lexical items. The Modern variety diverges most radically in that the polysynthetic verb is largely abandoned, so that CV + IV becomes the main verb type, though the IV does not utilize most of the morphology found in earlier speech – for example, object pronominals are never incorporated (Jennifer Lee 1987, p. 171). Furthermore, the IV is often elided altogether so that the verb lacks overt inflections altogether (pp. 147-178). For past tense marking the Kriol-derived particle *pin* (< *bin*) is often used instead of Tiwi inflections.

(12.5.8) karluwu     yi-**ma-ngan**-takirayi             kuwinawini  
 Trad.     NEG             he.PST-SBVE-**1PL.OBJ**-give     money  
*he won't give us any money*                             (p. 181)



motivation for CV + IV in MKK is not the loss of synthetic grammatical processes, but the failure of the MP verb to incorporate new lexical roots in a period when large-scale lexical borrowing has been inevitable (§6.2). In this view, it is quite plausible that MP will maintain substantial usage of its polysynthetic verb, even while continuing to borrow roots using CV + IV.

Tiwi and MP are two languages that are typologically very similar, have about the same degree of isolation from Australia's main urban networks, and have a very similar history of Mission settlement then secularization. It is an interesting question, then, why Modern Tiwi should have taken on an English verbal matrix, where MKK remains grammatically MP, with English lexical insertions.

Lee (1988) argues that a major factor in the overhaul of Tiwi grammar was the placement of all Tiwi girls in a Mission dormitory from the age of about 6. In the dormitory they were ordered to speak English, and had irregular contact with their parents, which Lee speculates may have interrupted the acquisition of morphology before the complex patterns of the verb could be learnt. This may well have been a genuine influence, but it should be noted that at the Port Keats Mission children of *both* sexes resided in dormitories (ages are not well documented), where they were supposed to speak English and could be punished for failing to do so (Nordlinger, *p.c.*), though some men who lived in the dormitory have told me that they spoke MP with the other boys there (§4.3). The dormitory system at Port Keats obviously did *not* cause a major interruption of complex morphological acquisition; and indeed, the plausibility of this scenario will only be better understood with further research into how polysynthetic languages are acquired (Kelly, Wigglesworth, Nordlinger, & Blythe, 2014).

Taking another approach to explaining the creolisation of Tiwi, there is some evidence of a more enthusiastic embrace of English among the Tiwi people compared to the people of Wadeye. In Wadeye, I do not believe that English is ever used among local Aboriginal people – and even when whitefellas are involved in the interaction, there can be some reluctance to use English, partly because many Wadeye people have limited command of English (§4.5.1). But on

Bathurst Island in the late 1970s, adults sometimes used English to address their children, in the hope that this would help them get started better at school (p. 336). In general the Tiwi embrace of whitefella institutions and whitefella language seems more wholehearted than in Wadeye, where the attitude to whitefellas is quite ambivalent. It is also reported that the Bathurst Island missionaries in general found Tiwi too difficult to learn, so that all except for one Father McGrath used English to communicate with the locals. Accordingly, the Mission school was taught in English (p. 328). In contrast, several of the Port Keats Mission staff learnt a fair degree of MP (which is also a very difficult language for English speakers), and both languages were used at the Mission school (Mark Crocombe, Gerry McCormack *p.c.*).

The divergent trajectories of Tiwi and MP can only be speculated upon, but this may be a case where subtle differences in language attitudes, and the balance of accommodation between two languages, has produced quite different linguistic outcomes.

#### *12.5.4 Verb suffix re-ordering*

The reordering and deletion of verb suffixes described in Chapter 10 is harder to compare with other town languages, since variation of this sort is largely unattested not just in Australia but in linguistics more generally. All evidence points to this being a morphosyntactic change-in-progress, without any social meaning attached to the innovative forms, or even any speaker recognition that variation is present (§10.6.3). Although there is a wide variation of forms attested, in sociolinguistic terms these do not appear to constitute “different ways of speaking”. I have endeavoured to show that there may be deeper syntactico-semantic motivations for the new suffix ordering (§10.8), though Marri language contact may also be a factor.

On the other hand, though I do not find that the innovative morpheme sequences are socially marked, it does seem possible that the use of endoclititic adverbials

(ex. 12.5.11) was a socially marked feature of “heavy” MP, which would explain why these are not used in MKK.

(12.5.11) ngarra      thardi-dha-**kathu**-ngime  
LOC            1incl.be(4).PST-**towards**-pauc.mf  
*towards where we were camping*

(Blythe 2009, cited Nordlinger 2010: 327)

### 12.5.5 *The irrealis merger*

Finally, in Chapter 11 we have seen that MKK has completed a merger between FUT, FUT.IRR and PST.IRR verb classifier categories to produce a general “irrealis” (IRR) category. There is also some evidence of a further merger of past classifiers into the same category, though this only occurs on some tokens for some speakers. Further paradigmatic mergers may be underway in the 38-member set of classifiers found in MP (§8.3.1), though this is a large topic that I have been obliged to exclude from the thesis. Comparable, moderate paradigm mergers and simplifications are found in Dhuwaya (Amery, 1985, pp. 85–91); while rapidly declining languages such as Young Peoples’ Dyirbal show an altogether different order of morphological simplification (Schmidt, 1985b, pp. 44–64).

With regards to the IRR merger I have found evidence, via multivariate analysis of speaker differences, that Marri heritage kigay are leading the change (§11.2.3). This may indicate that Marri heritage kigay are simply more disposed to use the more innovative MKK forms – but it also suggests that there may be a language contact influence, since the general IRR classifier category matches a classifier category in Marri language verb morphology (§11.2.6). There is some evidence, in the higher rate of FUT forms found in careful speech, that the merger of the IRR form is perceived as “incorrect” and may therefore be socially marked. The fact that the innovation is led by a hereditary group – Marri heritage kigay – additionally raises the possibility of it being associated with a group identity. In general phonological and lexical variants are more commonly found as

sociolinguistic markers (Labov, 2001, p. 28), though there are also known cases of socially marked paradigm mergers, such as the African-American merger of third-singular -s verb forms with other person/number forms (e.g. Bucholtz, 2011).

It is worth noting that we find some evidence for Marri language structural influence on morphosyntactic changes in MKK (though for some changes the data is not rich enough to reach firm conclusions), while there is virtually no evidence of English structural influence. Conversely, there is large-scale borrowing of English vocabulary, but strikingly, I have not encountered a single instance of any kigay, Marri heritage or otherwise, borrowing Marri vocabulary in natural speech.

	Lexical	Grammatical
English	√	X
Marri languages	X	√

**Figure 12.5.1 Language contact influences on MKK**

The fact that Marri languages have had at least some grammatical influence on MKK must be attributed to the extensive bilingualism between these languages in the Mission era – and in particular the fact that the majority of the Mission population were L2 speakers of MP, who might have been expected to transfer some features from their Marri first languages (§4.3). The fact that Marri languages and MP are so structurally isomorphic means that there are rather few points on which any structural difference might have been transferred, which may explain why there is not more radical evidence of contact effects in MKK. By contrast English, structurally so different from any of these languages, has had no structural influence because there is hardly any history of English or Kriol speakers acquiring MP as L2 – or of children acquiring English alongside MP, as in the Tiwi case.

Whereas English lexicon has been borrowed in abundance – as part of marking out an urban, youth variety or “slang” – Marri language has not been used for this function. I am somewhat surprised at this, and can only hypothesise that the Aboriginal view of land–language connections creates too strong a prohibition against using the wrong words in the wrong place. We saw in §4.3.2 that Magati Ke people effectively made a decision not to use their language publicly in Wadeye, and we might presume from this that vocabulary, being the most identifiable and cognitively salient part of language, would be the most actively avoided as these and other Marri people made the switch to MP.

## **12.6 Urbanisation and language change**

The evidence from Wadeye, and from the literature on other town languages across northern Australia, suggests that phonological and lexical innovations are favoured in the development of urban youth varieties, while there is little sign of new morphosyntactic structures being elaborated, and quite significant evidence of complex morphology being abandoned. The degree of grammatical overhaul seems to correlate loosely with the degree of linguistic and cultural contact with cosmopolitan networks in which English and Kriol are the norm. In some large towns on the highway, such as Tennant Creek or Katherine, only fragments of the bush languages (mostly lexical, but including some simple grammatical elements) are retained by young people, integrated into an English/Kriol frame. But the correlation is not exact: for example, in Alice Springs, which is the main urban centre for central Australia, Arrernte is still spoken to some degree; while conversely there are remote settlements such as Lake Nash where creolisation has occurred (Jane Simpson, *p.c.*). In towns like Kalkaringi and Lajamanu, on the border of the Kriol-and-cattle-station belt to the north, and the traditional language strongholds to the south, a middle path is taken by blending elements of bush and cosmopolitan languages. In the most remote towns, such as Wadeye, the traditional grammar remains largely intact, with perhaps no more reduction in complex structures than might be expected from any changing language – but it is notable that the new structures developed as part of the youth slang do not



involve the sort of morphosyntactic elaborations that must have occurred in the evolution of polysynthetic MP during bush days.

One question to emerge from this is, over the long term, can polysynthesis survive in town? Trudgill (2011) has argued that “grammatical complexity”, under which rubric he holds morphological complexity to have a central place, is facilitated by small, isolated, stable societies. More cautious scholars have concluded that, when it comes to the question of what special character language evolution may have in small societies, we essentially still know nothing (Bower, 2010; Crowley & Bower, 2009, pp. 257–8). The evidence presented in this thesis does provide limited support for Trudgill’s theory, but there is still much work to be done to disentangle the effects of social indexing, childhood acquisition and language contact in driving linguistic change in this remote Aboriginal community.

Kardu kigay provide a fascinating case of a group of people whose language and culture is steadfastly idiosyncratic, appropriating materials from wider cosmopolitan networks, but fusing these into highly distinctive local semiotic systems. Yet they do not live in the hunter-gatherer world of their grandparents, and the language they speak is not a matter of “language maintenance”, but of intricate changes unfolding. Kigay engage with globally mediated culture and with English language on their own terms, and this influences their own local forms in ways that remain unpredictable – though in this thesis I have illustrated some examples of how these interactions operate.

## **12.7 Questions for further research**

### *12.7.1 Linguistic and cultural contact*

- How does “diasporic” MP fit into multilingual environments such as Palumpa, Daly River and Darwin town camps? Does the MP spoken in these environments show more radical language-contact effects than that

spoken at Wadeye? This is also a small group of MP speakers at Kununurra in Western Australia, who may represent a more southerly dialect, perhaps identifiable as Murriny Kura (Joe Blythe, *p.c.*). (§4.2.1, §4.4)

- What language contact effects can be identified among the Mission generation who speak Marri languages as L1 and learnt MP as L2? This question is quite urgent, as there are very few first-language Marri speakers still alive. (§4.3, §7.5, §10.4.3, §11.2.6)
- What patterns can be found by quantitative analysis of English fricative and affricate assimilation, and English word-initial voicing contrast? Are these variables lexically defined? Different for different speakers? Different in different speech types? (§6.4, §6.5)
- What linguistic and cultural forms are diffused between distant Aboriginal groups who encounter one another in Berrimah Prison? (§3.7.1)

### *12.7.2 Phonetic variation, social identity and style*

- How do /p/ and /k/ lenition pattern in MKK natural discourse (narrative or conversational)? (§7.3.2)
- What are the sociophonetic/interactional correlates of *style-shifting* in MKK discourse? (§7.3.3)
- How do *age-graded speech* and *change-in-progress* interact for /p/ and /k/ lenition? Relevant data could be collected by recording the same speakers at different points in their lives, or recording speakers of the same age at different points in history. (§7.3.3)

- How does *velar backing* pattern in MKK? What are the phonological factors, in what speech types or interactive contexts, and which speakers deploy the backed variant most? (§4.7.5)
- What linguistic features do MP native speakers identify as “heavy” and “light” language? (§4.8.3, §12.3.3)

### *12.7.3 Murrinh Patha phonological and morphosyntactic structure*

- Are there probabilistic differences between the NFUT + Telic vs PST + Telic alternative past encodings in MKK? What semantic, discursive or speaker factors may influence selection from these forms? (§11.3.6)
- What are the grammatical, interactional and sociolinguistic functions of the presentational verb form? (§11.2.7)
- Does MP have distinctive long sonorants, and should these be analysed as single or double segments? (§5.6)
- How consistently are word-initial voicing contrasts produced? (§5.5.1)
- How is first-syllable and second-syllable stress distributed among trisyllabic monomorphemes? (§5.9)
- How do SUBJ.NUM, OBJ and RR morphemes to the right of the verb classifier interact in the speech of various kigay? Structured visual stimuli should be used to test this. (§10.6)
- What is the syntactic motivation for the (CV + IV) → (IV + CV) ordering switch in MP, Ngan’gi and Maranunggu? (§10.7)

- Change and variation in the classifier paradigm. Are all the classifiers documented for SMP still used in MKK? Are there mergers between classifiers? Are there phonological changes in the forms? Analogical effects? What are the comparative frequencies of classifiers? Are there any changes evident in the productive combination of classifiers and roots? (§8.3)

#### *12.7.4 Wadeye youth culture*

- What attitudes towards MP are prevalent among those Priest kigay who are least linked to MP heritage? (§4.3.3)
- How does the sociolinguistic ecology of Wadeye compare to other multilingual towns across northern Australia? (§4.3)
- What do *puny* and *tjembitj* initiations mean to contemporary kigay? (§2.6.2).
- How did the metal mobs emerge and coalesce in the 1980s and 90s? (§2.7)

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