

CASE-MARKING IN CONTACT:

THE DEVELOPMENT AND FUNCTION OF CASE MORPHOLOGY IN
GURINDJI KRIOL,
AN AUSTRALIAN MIXED LANGUAGE.

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ABSTRACT:

This thesis is an investigation of case morphology in a mixed language, Gurindji Kriol. Gurindji Kriol is spoken by the Gurindji people in northern Australia. It fuses Gurindji, which is a member of the Ngumpin-Yapa subgroup of the Pama-Nyungan family, with Kriol, which is an English-lexifier creole spoken across the north of Australia. Gurindji Kriol exhibits a structural split between the NP and VP systems, but is lexically quite mixed. Kriol provides much of the verbal grammar including tense and mood auxiliaries, and transitive, aspect and derivational morphology. Most of the NP structure is of Gurindji origin including case and derivational morphology. Lexically, nominals and verbs are derived from both source languages. In form, the various sub-systems of Gurindji Kriol bear a close resemblance to their source languages. However contact and competition between Gurindji and Kriol in the process of the formation of the mixed language has altered the function and distribution of these systems, including the Gurindji-derived case morphology. The aim of this thesis is three-fold: (i) to provide the first detailed socio-historical and grammatical description of Gurindji Kriol (§2 and §A1), (ii) to propose a path by which Gurindji case morphology was incorporated into the Gurindji Kriol clause (§3-§5), and (iii) to demonstrate changes in the use of four case markers quantitatively (§6-§9).

I focus on the development and function of case morphology because it is here that the character of Gurindji Kriol emerges most clearly. The behaviour of inflectional morphology in language contact provides a good litmus test for the relative strengths of interacting languages. In cases of code-switching or borrowing, the dominant language can be diagnosed, in part, by the resilience of its inflectional morphology, with the weaker language generally only contributing lexical material to the mix (Muysken, 2000, Myers-Scotton, 2002). Thus the presence of Gurindji inflectional morphology within a Kriol verbal frame is unusual, and is indicative of the equal weighting given to Gurindji and Kriol in the morpho-syntactic frame of the mixed language. This degree of syntactic intertwining has been observed in a number of other mixed languages, namely Michif (Bakker, 1997), Mednyj Aleut (Golovko, 1994) and Light Warlpiri (O'Shannessy, 2005) (§3).

In contact situations where inflectional morphology from both languages is present, it is difficult to identify the direction of transfer of linguistic material. Such a diachronic analysis is possible for Gurindji Kriol because Gurindji-Kriol code-switching data from a prior stage is available (McConvell, 1998, McConvell and Meakins, 2005). On the basis of a comparison between this code-switching data and the mixed language data, I show that Kriol provided the morpho-syntactic frame for code-switching with Gurindji case marking incrementally integrated via nominal adjuncts during the formation of Gurindji Kriol (§4). I analyse these nominal adjuncts as alternational structures, in the sense of Muysken's (2000) typology of code-switching (§5). This comparison provides empirical evidence which supports the notion that mixed languages can derive from a prior code-switching stage, and challenges the assumption that only insertional code-switching is responsible for mixed language genesis.

The Gurindji Kriol case markers also provide a unique window on the processes involved in mixed language genesis. Unlike other subsystems of this mixed language which have stabilised, the case-marking remains in contact and competition with Kriol equivalents, such as prepositions. Though case morphology is the favoured system for marking syntactic and spatial relations, the replication of this Gurindji system continues to be influenced by Kriol. I examine four case markers within specific functional domains to demonstrate various contact outcomes including double-marking, convergence and functional shift. Specifically, the dative marker marks possessive constructions, however the in/alienability distinction found in Gurindji has been lost (§6); double marking of locations using the locative case marker and equivalent Kriol preposition is the emergent form of younger Gurindji Kriol speakers (§7), convergence between Gurindji and Kriol has resulted in the extension of the Gurindji locative marker into goal marking under the influence of a general Kriol locational preposition (§8), and finally the ergative marker's role in argument marking has been largely supplanted by word order and it now marks information structure (§9).

DECLARATION:

This is to certify that:

- (i) this thesis comprises only my original work towards the PhD
- (ii) due acknowledgment has been made in the text to all other material used.
- (iii) the text is less than 100,000 words in length, exclusive of tables, maps, examples, bibliography and appendices.

Felicity Meakins

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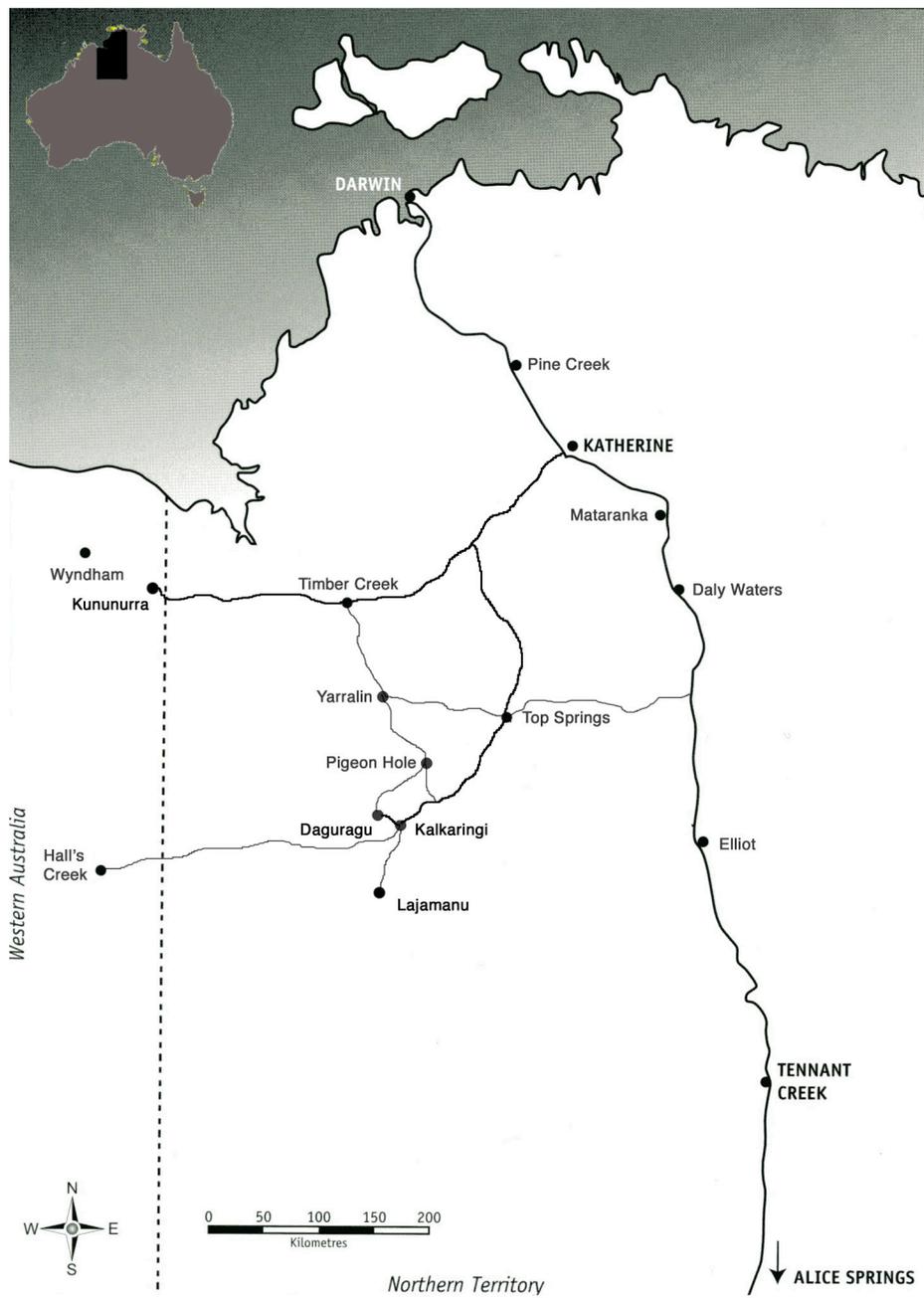
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Figure 1 Map of the Victoria River District and its communities



LIST OF ABBREVIATIONS:

ABL	ablative	NF	non-future
ACT	activity	NMZ	nominaliser
ACROSS	across	O	object
AGENT	agentive	OBL	oblique
ALL	allative	ONLY	only
ALONE	alone	OTHER	another
BIT	a little bit	PA	pa (epenthetic)
CAT	catalyst (auxiliary)	PAUC	paucal
COMP	comparative	PER	perfect
CONT	continuative	PL	plural
DAT	dative	PLU	plural
DET	determiner	POSS	possessive
DIS	discourse	PREP	preposition
DOUBT	doubt	PRIV	privative (without)
DUAL	dual	PROP	proprietary (having)
DU	dual	PST	past
DYAD	kinship pairing	REDUP	reduplication
ERG	ergative	REFLX	reflexive
EX	exclusive	S	subject
FOC	focus	SG	singular
FUT	future	SUBSECT	skin name (kinship)
GROUP	group	TAG	tag question
IF	immediate future	TOP	topic
IM	imperfect	TRN	transitive
IMP	imperative	1	first person
INC	inclusive	2	second person
INCHO	inchoative	3	third person
IO	indirect object		
LOC	locative		
MOD	modal		
NEG	negation		

CONVENTIONS USED IN TRANSCRIPTION AND GLOSSING:

plain font	Kriol-derived morphemes	-	morpheme break
italics	Gurindji-derived morphemes	=	clitic boundary
bold font	element for reader to pay attention to.	.	separates categories encoded by a portmanteau morpheme
...	follow-on utterance	→	acting on

CONVENTIONS USED TO INDICATE SOURCE OF DATA:

All Gurindji Kriol examples are accompanied by a reference containing certain information shown schematically below:

(FHM104	CA:	22yr:	Goal pictures)	
↓	↓	↓	↓	
Recording	Speaker	Age in 2003	Context of utterance	
RECORDING:	FHM	Collected specifically for this PhD project see §1.6.1.1		
	FM	Collected for the Aboriginal Child Language project see §1.6		
SPEAKER: see §1.6.1	AL	Alrisha Campbell	LE	Leanne Smiler
	AS	Andros Scobie	LD	Leyton Dodd
	AR	Anne-Maree Reynolds	LS	Lisa Smiler
	AN	Anne-Tara Patrick	MC	Mary Campbell
	KW	Arnold Williams	MS	Mary Smiler
	AC	Azaria Chubb	MH	Mildred Hector
	BP	Becky Peter	MJ	Mildred Jiwijiwi
	BR	Breeanne Sambo	NM	Nathaniel Morris
	BS	Byron Smiler	NI	Nikita Smiler
	CA	Cassandra Algy	NN	Noelene Newry
	CE	Cecelia Edwards	PV	Polly Vincent
	CD	Cedrina Algy	RA	Renisha Algy
	CH	Chloe Algy	RP	Ricarda Peter
	CO	Connie Ngarlmaya	RI	Rina
	CR	Curley Reynolds	RR	Ronaleen Reynolds
	ER	Elaine Ricky	RO	Rosita Rose
	ES	Ellen Splinter	RS	Rosy Smiler
	EO	Ena Oscar	RX	Roxanne Rankin
	FO	Frances Oscar	SS	Samantha Smiler
	HS	Hannah Sambo	SA	Sandra Edwards
	JG	Janet George	SO	Sarah Oscar
	JD	Janine Donald	SE	Selma Smiler
	JC	Jasmine Campbell	SU	Susan Sambo
	JA	Jenny Algy	TA	Tamara Ross
	JV	Jessica Vincent	TJ	Tanya Jimmy
	JO	Joseph Smiler	TB	Thelma Bobby
	JR	Judy Ricky	VB	Vanessa Bernard
	KO	Kellisha Oscar	VR	Veronica Reynolds
	KS	Kirsty Smiler	VD	Violet Donald
	KP	Krissella Patrick	ZH	Zena Hughes

RECORDING	Conversation	Informal talking between participants
CONTEXT:		see §1.6.9.9.1
	Frog story	Picture-prompt elicitation see §1.6.3.1.2
	Bird story	Picture-prompt elicitation see §1.6.3.1.2
	Monster story	Picture-prompt elicitation see §1.6.3.1.2
	Hunting story	Picture-prompt elicitation see §1.6.3.1.2
	Bicycle story	Picture-prompt elicitation see §1.6.3.1.2
	Crocodile story	Picture-prompt elicitation see §1.6.3.1.2
	Sick woman story	Picture-prompt elicitation see §1.6.3.1.2
	Guitar story	Picture-prompt elicitation see §1.6.3.1.2
	Horse and cow story	Picture-prompt elicitation see §1.6.3.1.2
	Possession books	Picture-prompt elicitation see §1.6.3.1.2
	Locative pictures	Picture-match game see §1.6.3.1.3.1
	Allative pictures	Picture-match game see §1.6.3.1.3.1
	Dative pictures	Picture-match game see §1.6.3.1.3.1
	Ergative pictures	Picture-match game see §1.6.3.1.3.1
	Bingo cards	Picture-match game see §1.6.3.1.3.1
	Possessive cards	Picture-match game see §1.6.3.1.3.1

1. INTRODUCTION

1.1 Preamble

Mixed languages were considered an oddity of contact linguistics until Thomason and Kaufman (1988) revisited the challenges they posed. Before then, debate about whether or not mixed languages actually existed stifled much descriptive work or discussion of their origins. Peter Bakker's "A Language of Our Own" (1997) provided the first detailed account of a mixed language, Michif. Subsequently, the debates surrounding mixed languages have shifted from questioning their existence to a focus on their formation, and their social and structural features. These debates continually benefit from the identification of new mixed languages, some of which reinforce current views, while others challenge us with a new range of structural outcomes that result from the intense interaction between the grammars of two languages.

This thesis introduces a substantial corpus from a previously undescribed mixed language, Gurindji Kriol. This mixed language is spoken by the Gurindji people who live at Kalkaringi¹ in the Victoria River District (VRD) of the Northern Territory, Australia

¹ When I refer to Kalkaringi, I include Daguragu which is a settlement 8km away. These communities were set up separately historically; however they operate as a single entity in terms of kin relations and

(see map). It is the result of contact between the traditional owners of the area, the Gurindji, and non-indigenous colonists, who established cattle stations in the VRD in the early 1900s and brought with them a cattle station pidgin and later, Kriol², via imported Aboriginal labour. One linguistic consequence of colonisation in this area was the genesis of a mixed language, Gurindji Kriol. Structurally, Gurindji Kriol splices the Kriol verb phrase structure including the tense, aspect and mood system with the nominal structure of Gurindji, complete with case suffixes and other inflectional and derivational morphology. However this mixed language is not the result of a simple replication of features from Gurindji and Kriol. Though Gurindji Kriol bears some resemblance to both of its source languages, it uses the forms from these languages to function within a unique system. In Gurindji Kriol, there is a sense of someone holding a new baby and observing the physical attributes it shares with each parent, but being unable to figure out where the child's personality comes from. In this study, I will focus on one structural aspect of Gurindji Kriol, case morphology, which is derived from Gurindji, but functions in ways that differs from its source.

The presence of Gurindji case morphology in Gurindji Kriol is one of the more striking structural features of this mixed language, given the dominance of Kriol structure in the verb phrase. In general, one of the signs of the strength of a language within extreme language change situations is the behaviour of inflectional morphology (§3). For instance, in cases of language death, inflectional morphology is often one of the first elements of a language lost (Sasse, 1992a). In addition, where there is an interaction of languages, such as in situations of code-switching or borrowing, inflectional morphology is usually only derived from one of these languages (Myers-Scotton, 2002). In these situations, there is often an asymmetry between the interacting languages, with the more dominant language providing the grammatical frame for the clause and the weaker language contributing mostly lexical elements. The language which sets the frame for the mixed clause contributes much of the verbal morphology, constituent order and the

administration. In fact all of my fieldwork was done at Daguragu; however Kalkaringi is the better known settlement and I will continue to use this name.

² Kriol is an English-lexifier creole language spoken across the north of Australia. Information about its historical origins can be found in §2.2.4, and its structure in §A1.2.2.

predicate argument structure to the mixed clause. Most mixed languages, such as Media Lengua (Muysken, 1994), Angloromani (Boretzky & Igla, 1994) and Ma'á (Mous, 2003b) also follow this pattern closely, with one language contributing much of the grammar, and the other language providing significant amounts of lexical material. Some mixed languages are exceptions to this observation, however. For example, Michif distributes the grammatical load of the clause between French and Cree (Bakker, 1997). Gurindji Kriol is another exception, for though Kriol provides most of the verb structure, inflectional morphology such as case morphology is derived from Gurindji. The result is a composite grammatical frame where neither language dominates, and both contribute to the structural character of this mixed language.

This thesis is set within these observations about inflectional morphology in situations of language contact - how structural resources from two languages can fuse, and the extent to which these systems are altered in the process of contact. Specifically the main body of this thesis has two aims. It will (i) chart the development of case morphology in Gurindji Kriol (§3-§5), and then (ii) describe its function in the mixed language today (§6-§9). Historically, Gurindji Kriol originated in code-switching. In the 1970s, code-switching between Gurindji and Kriol was the pervasive linguistic practice at Kalkaringi, with Kriol providing the grammatical frame for the code-switching (McConvell & Meakins, 2005) (§4.2). I will demonstrate that case-marked nominals were only found as left and right dislocated elements, at this stage (§4.3.2), and argue that, as the code-switching developed into a mixed language, case-marked nominals were incrementally introduced into the predicate argument structure of the mixed language clause. This process of integration did not leave the Gurindji case morphology in tact. Structural congruence between the switching languages provided various potential insertion points for Gurindji within the grammatical frame (§4.4.2); however these points were also sites of friction. Though case-marked nominals were admitted into these switch sites, competition with functionally equivalent elements such as Kriol prepositional phrases ensured that, though Gurindji case morphology dominates, these forms often carry genetic material from Kriol (§6-§9).

In order to build up this picture of case morphology in Gurindji Kriol, a large amount of basic description of this newly identified mixed language was required. 80 hours of Gurindji Kriol data have been collected and transcribed, following a language documentation approach (Himmelmann, 1998). Language was sampled from various social contexts (see §1.6.2 for methodology), and has resulted in a grammatical sketch of Gurindji Kriol (Appendix 1), a description of the language ecology and socio-historical setting of Kalkaringi (§2), and a corpus of sound-linked transcripts. Some sample transcripts are found in Appendix 4. Few mixed languages have this level of documentation associated with them (Michif (Bakker, 1997) and Ma'á (Mous, 2003b) being exceptions). Thus, most fundamentally, this thesis brings a new body of data to bear on the study of mixed languages.

I use this data and code-switching data from the 1970s (McConvell, 1988a) to address a number of ongoing debates in the mixed language literature, where empirical evidence has not been available thus far. For example, much disagreement exists about whether or not specific mechanisms are required for mixed language genesis, and in particular the role that code-switching plays in this process (Auer, 1999; Bakker, 1997; Thomason, 1995). In §4 and §5, I compare Gurindji-Kriol code-switching data with mixed language data to postulate a route by which mixed languages may derive from the gradual grammaticalisation of code-switching. More specifically, I also show that alternational code-switching, that is switches between the grammatical structures of different languages, has been pivotal in the integration of case marking into the morpho-syntactic frame of Gurindji Kriol, which is contrary to claims made by Backus (2003).

The data presented in this thesis also contributes to a number of other issues, including the possibility of the co-existence of two phonological systems within one language (Papen, 1987; 2003; Rosen, 2000), which is discussed in §A1.4. I also give a detailed socio-political picture of Gurindji Kriol at the time of genesis (§2.3-§2.5), drawing on a range of historical sources, oral history accounts and ethnographies (see for e.g. Hardy, 1968; Hokari, 2002; Rangiar, 1998). In the case of Gurindji Kriol there is more historical documentation available than for other mixed languages. Much has been written about

the Gurindji people's landmark land rights struggle in the 1970s, which immediately preceded the formation of this language. Finally this thesis also extends the study of mixed languages into new areas. To date this field has provided descriptive and developmental accounts of the types of splits found in mixed languages, and the contribution of each language to particular domains of the grammar and the lexicon. Little, however, has been said about how different components of the source languages function in the new language, though see Matras and Sakel (2007) for a recent exception. This thesis uses the quantitative methods of variationists to look more closely at the results of this type of language mixing, and, in particular, discusses processes of convergence in one particular domain of Gurindji Kriol: Gurindji-derived case morphology (§6-§9).

1.2 An overview of the origins and structure of Gurindji Kriol

Gurindji Kriol originated from contact between non-indigenous colonists and the Gurindji people. In the early 1900s, white settlers set up cattle stations in the Victoria River District area, including on the homelands of the Gurindji. After an initial period of violent clashes, Gurindji people were put to work on the cattle stations as stockmen and kitchen hands in slave-like conditions (Hardy, 1968). The *lingua franca* spoken by the station owners and the Gurindji workers was a pidginised English, and later Kriol was introduced through imported Aboriginal labour. Kriol was added to the linguistic repertoire of the Gurindji, and included in their code-switching practices. In the 1970s, McConvell (1988a) observed that code-switching between Kriol and Gurindji was the dominant language practice of Gurindji people. At this time, the linguistic practices of many Aboriginal groups across northern Australia was very similar. However, where Kriol replaced the traditional language of many other groups and code-switching was indicative of a decline in traditional language use, a mixed language originated from similar circumstances at Kalkaringi. Socio-political reasons for the emergence of a mixed language amid the increasing dominance of Kriol are given in §2.3 in a discussion of the post-contact history of the Gurindji people.

Though Gurindji Kriol originated in Kalkaringi, it has spread north to Pigeon Hole and Yarralin (see map) and is now spoken as the main language of many Bilinarra and Ngarinyman people. Nowadays all Gurindji people under 35 years of age speak Gurindji Kriol as their first language. The older members of this group also speak Gurindji, and younger Gurindji Kriol speakers have a high level of passive knowledge, albeit untested. All Gurindji people also speak Kriol to some extent, with older people using a form which resembles the old cattle station pidgin more closely, and younger people are able to speak a variety of Kriol found west of Katherine. Gurindji has become an endangered language, with around 60 elderly speakers remaining of the 700 people who identify as Gurindji (Lee & Dickson, 2002), and Kriol is spoken by approximately 20 000 Aboriginal people across the north of Australia (Munro, 2000). Gurindji Kriol is now the dominant language in most social domains; however it is spoken alongside Gurindji and Kriol, and is a 'symbiotic' mixed language in this regard (Smith, 2000). Other languages are also found at Kalkaringi, including Warlpiri and Aboriginal English, which are used to varying extents and in different contexts. Code-switching is also a continuing practice, and it is common to find code-switching between Gurindji Kriol and its source languages. Distinguishing Gurindji Kriol from code-switching is therefore a difficult business, and this issue will be discussed in §1.5.2. Thus the language environment of Kalkaringi presents a complex picture of language contact and mixing. A more detailed description of the language ecology of this community can be found in §2.2.

Gurindji Kriol exhibits a structural split between the noun phrase system and the verb phrase system, but is lexically quite mixed, as was introduced in §1.1. In terms of structure, Kriol contributes much of the verbal grammar including tense and mood auxiliaries, and transitive, aspect and derivational morphemes. Gurindji supplies most of the NP structure including case and derivational morphology. Both languages also contribute small amounts of grammar to the systems they do not dominate. For example, the Gurindji continuative suffix is found in the VP, and Kriol determiners are common in the NP. Kriol also provides Gurindji Kriol with an SVO word order, though the word order is more flexible than Kriol with information structure determining word order to some extent. Complex clauses are constructed using both Gurindji and Kriol strategies,

for example coordinating clauses use Kriol conjunctions, and subordinate clauses are formed using Gurindji-derived case and inchoative marking.

Structural splits between the nominal and verbal systems appear to be quite rare, with grammar-lexicon splits more commonly found. Michif, a Canadian mixed language, is the most commonly cited example of a V-N split, combining Cree (VP) and French (NP) (Bakker, 1997). Though Gurindji Kriol bears some resemblance to Michif, they differ in their lexical mixes. In Michif, Cree also provides most of the verbs, and French, the nouns. On the other hand, Gurindji Kriol does not follow this language-structure divide. Though Gurindji provides the grammatical frame for the nominal system, nominals themselves are derived from both Gurindji and Kriol. The same is true of the verbal system. In this respect, Gurindji Kriol patterns most closely with a neighbouring Australian mixed language, Light Warlpiri. This language is spoken 100km from Kalkaringi at Lajamanu (see map) and mixes the structures of Kriol (VP) and Warlpiri (NP). Lexically nominals are also derived from both languages; however verbs are almost solely of Kriol origin (Meakins & O'Shannessy, 2005; O'Shannessy, 2005). A more detailed comparison of Gurindji Kriol with other mixed languages is given in §1.5.1.

(1)(b) below demonstrates Gurindji Kriol's structural split and lexical mixing schematically. In this example, the core VP structure *i bin baitim im* (it bit him) including the tense auxiliary *bin* and transitive marker *-im* is drawn from Kriol (1)(a), while the NP frame, including ergative and locative case marking, are from Gurindji (1)(c). Note that the lexicon is mixed. For example, both a Kriol noun, *man*, and a Gurindji noun, *wartan* (hand/finger), are present. The Gurindji elements are given in italics, and plain font is used for Kriol elements. Optional elements are indicated by brackets, and aspects of the clause under discussion are bolded. Glossing abbreviations are given at the beginning of this thesis. I will use this style throughout the thesis to differentiate Gurindji and Kriol and to highlight elements.

(1)

(a) det brokbrok [im=in bait-im (im)] det man la bingka (K)
 the frog 3SG=NF bite-TRN the man PREP hand



(b) [ngakparn(-tu)] [i bin bait-im (im)] [det man wartan-ta] (GK)
 frog-ERG 3SG NF bite-TRN the man hand-LOC



(c) [ngakparn-tu] (ngu-ϕ-ϕ) katurl paya-rni [ngumpin wartan-ta] (G)
 frog-ERG CAT-3SG-3SG bite bite-PST man hand-LOC

"The frog bit the man on the hand."

The following example typifies the mixed character of Gurindji Kriol. This excerpt is from the Frog story and begins as the boy has climbs onto the back of the deer.

(2) (FHM144: LS20yr: Frog story)

(a) karu i=m top la=im kankula diya-ngka.
 child 3SG.S=NF be OBL=3SG.O up deer-LOC
 "The child is perched on top of the deer."

(b) i=m teik-im rarraj det karu-ma nyanuny ngarlaka-ngka
 3SG.S=NF take-TRN run the child-DIS 3SG.DAT head-LOC

an warlaku kanyjurra-ngka.
 and dog down-LOC

"The deer takes the child running on its head, with the dog below."

(d) det diya-ngku i bin jak im na karu an warlaku
 the deer-ERG 3SG.S NF make.fall 3SG.O DIS child and dog

kanyjurra-k, klif-nginyi-ma.
 down-ALL, cliff-ABL-DIS

"The deer threw the child and the dog downwards off the cliff."

(e) tubala baldan kujarrap-pa-rni karu an warlaku ngawa-ngkirri jirrupu.
 3DU fall pair-PA-ONLY child and dog water-ALL dive

"The pair of them, the child and dog fell down, plummeting into the water."

In this example, the verbal frame is Kriol with basic meaning verbs such as *teik* (take), *baldan* (fall) and *top* (be), tense marking *bin* (non-future) and transitive marking *-im* all derived from this language. Nominally the NP matrix is predominantly Gurindji. Present is Gurindji inflectional morphology including case marking, for example: ergative - *ngku/-tu*, locative *-ngka/-ta*, ablative *-nginyi*, allative *-ngkirri*; and dative pronouns, for example: *nyanuny* (3SG.DAT). Also present from Gurindji is discourse marking *-ma* and *-rni* (only). Lexically there is a mix between Kriol and Gurindji with some verbs derived from Kriol, 'teik-im' (take) and 'baldan' (fall), and others from Gurindji *rarraj* (run) and *jirrupu* (dive). Similarly nouns from both languages are present - *diya* (deer) and *klif* (cliff) from Kriol; and *karu* (child) and *ngawa* (water) from Gurindji.

§A1 provides a more detailed sketch of the grammar and lexicon of Gurindji Kriol.

1.3 Previous work on Gurindji Kriol

The identification of Gurindji Kriol as an autonomous language system has only occurred recently. As a result there is little work on this language to date. This mixed language was tentatively classified as such by Patrick McConvell and a number of Gurindji students in the 1980s (Dalton et al., 1995). Since then McConvell (2002b) has investigated the origins of Gurindji Kriol and other mixed languages, attributing their development to the typology of the source languages. Erika Charola, a linguist who lived for two years at Kalkaringi, explored the verb phrase structure of Gurindji Kriol in an honours thesis (Charola, 2002). Also relevant is McConvell's (1985a; 1988a) prior work on Gurindji-Kriol code-switching from the 1970s. This work has proven invaluable for linking Gurindji Kriol code-switching with the genesis of this mixed language (McConvell & Meakins, 2005). This section provides an overview of this literature.

Between 1974 and 1977, Patrick McConvell began documenting Gurindji and a related language Mudburra as a Research Fellow with the Australian Institute of Aboriginal Studies (now AIATSIS). Although his focus was Gurindji and collecting monolingual

texts to produce a Gurindji grammar and dictionary, he (1988a, p. 145) observed that Gurindji was only one aspect of a highly complex language ecology consisting of a number of languages including other Gurindji dialects (Wanyjirra and Malngin), and contact languages (Kriol and Aboriginal English). Moreover code-switching between these languages was the normal style of communication. McConvell found that though people used both Gurindji and Kriol as the grammatical frame for code-switching, Kriol was found in this role for the most part. This language environment was essentially the cradle of Gurindji Kriol, and McConvell's recordings and resultant papers (1985a; 1988a) from this time provide information about the sort of language environment that immediately preceded the genesis of at least one mixed language. One of these recordings forms the basis of the analysis in §4 and §5 which describes the integration of case morphology into the core clause of Gurindji Kriol.

In the mid-1980s, McConvell observed that many of the patterns in the code-switching that he had described 10 years earlier had stabilised in the speech of Gurindji children. Together with Gurindji students - Lorraine Dalton, Sandra Edwards, Rosaleen Farquarson and Sarah Oscar - McConvell investigated Gurindji children's speech and used the term 'mixed language' to describe their style of speech. They found that, though children were already favouring Kriol in the verb phrase to the exclusion of the Gurindji coverb-inflecting verb complex, they were also maintaining much of the complex nominal morphology of Gurindji grammar albeit with some allomorphic reduction and system levelling (Dalton et al., 1995). Unfortunately little data is available from this time due to technical issues with recording the children's conversation. A discussion of their findings is given in §5.3.3.

The identification of this style of speech as a mixed language led to further work which treated Gurindji Kriol as an autonomous language system, and allowed the Gurindji and Kriol components to be described with respect to each other rather than merely with reference to their source languages. Charola began this descriptive work with an account of the Gurindji Kriol verb phrase. Based on a small set of stories told to picture-prompt books, Charola (2002) analysed the verb phrase as an ultimately Kriol system but with

vestiges of the Gurindji coverb-inflecting verb complex. The manner of the language split in Gurindji Kriol prompted an investigation of its genesis. McConvell (2002b) used Nichol's (1986) head and dependent marking classification of languages to propose a path for the genesis of V-N mixed languages. He suggested that head-marking languages were more likely to maintain the ancestral language in the verb phrase, such as Cree in Michif, and dependent-marking languages would retain the nominal system of the ancestral language, as is the case for Gurindji Kriol. Further work on the formation of Gurindji Kriol can be found in a paper by McConvell and Meakins (2005) which links the patterns described for the Gurindji-Kriol code-switching in the 1970s with the resultant structure of Gurindji Kriol. A discussion of this paper begins in §4.2.

My own fieldwork on Gurindji Kriol began informally in 2001 as Erika Charola's successor at Diwurruwurru-jaru Aboriginal Corporation (DAC or Katherine Regional Aboriginal Language Centre). Though Gurindji and Kalkaringi were not initially included in my work, I coordinated a number of language revitalisation projects for other related languages in the Victoria River District. One of my jobs was to facilitate Bilinarra and Ngarinyman language classes in small bush schools in three communities: Pigeon Hole, Bulla and Amanbidji. Though these language classes provided me with a good opportunity to learn Bilinarra and Ngarinyman, I found it quite difficult to keep one step ahead of the school children. One of the barriers to learning Bilinarra and Ngarinyman was a lack of input even from the older women³ who were teaching me their languages. Though these women spoke some Bilinarra and Ngarinyman to each other, most younger people rarely used their traditional languages without some mixing with Kriol. After about six months, I found that I was acquiring a language mix which I thought was code-switching rather than Bilinarra or Ngarinyman, and as time went on I realised that there were some aspects of these traditional languages that I had little control over, particularly the inflecting verb system and bound pronouns. Rather than attempting a stilted and

³ I am immensely grateful to Ivy Hector Nambijina-Nangari, Annie Packsaddle Nanagu† and Eileen Roberts Gajuj Nangala who showed extraordinary patience in teaching yet another DAC linguist their languages, knowing that I too would only be helping them only for a short time in their wish to transmit these languages to their grandchildren. In particular Annie Packsaddle was a wonderful Ngarinyman teacher and with more energy than most women of her age. *Ankaj kajirri*.

probably ungrammatical construction, I would automatically switch to Kriol when I was using verbs and pronouns. It was during this time that I began to realise just how conventionalised the language mix was. It was apparent that its status as a children's variety, which was indicated in Dalton et al's (1995) article, had shifted to a community language. I finished working at the Language Centre to begin a PhD in 2004, as a part of the Aboriginal Child Language project⁴. It was clear from the outset of this project that little could be said about the children's use of language at Kalkaringi when so little was known about adult speech. Thus work on the ACLA project gave me the opportunity to explore some structural features of Gurindji Kriol. This thesis is a culmination of this work.

1.4 Overview of this thesis

My account of the development and current function of case morphology in Gurindji Kriol is divided into three sections. Before focussing on case morphology, I begin with a general sociolinguistic description of the environment and origins Gurindji Kriol (§2), with further description found in a grammatical sketch (§A1). The main body of the thesis begins with an account of the formation of Gurindji Kriol and the integration of Gurindji case morphology into the morpho-syntactic frame of this mixed language via a prior code-switching stage (§3-§5). Following this diachronic account, I present four studies of case morphology in the present day mixed language. These studies discuss the development of these case markers from their Gurindji origins (§6-§9). These diachronic and synchronic sections are drawn together in the §10 in a discussion of Gurindji Kriol in the context of language evolution, variation and change. Throughout this thesis, I will argue that the presence of Gurindji-derived case marking in Gurindji Kriol is a consequence of the grammaticalisation of code-switching, in particular alternational code-switching, and that the shift in the form and distribution of this case morphology is the result of continuing contact with Kriol functional equivalents.

⁴ <http://www.linguistics.unimelb.edu.au/research/projects/ACLA/index.html>

This dissertation begins with a description of the socio-linguistic setting of Gurindji Kriol. An overview of this work has been given in the introduction above; however Chapter 2 will give a fuller account. Due to the age of many mixed languages, little is known about the social setting of their origins. It is serendipitous that in this case the post-contact history of the Gurindji people is well documented. This Aboriginal group became infamous in the mid-1960s for protesting against the harsh conditions of their employment and life on Wave Hill cattle station. This protest, which took the form of a nine-year workers strike, became a vehicle for the reclamation of their traditional lands. As a consequence, the Gurindji were among the first Aboriginal people to receive their land back, which gave a significant boost to the land rights movement in Australia. The plight of the Gurindji inspired a lot of interest from non-indigenous Australians, particularly those involved in the Labour Union movement. For example, Frank Hardy who was a member of the North Australia Workers Union went to live at Kalkaringi and assisted the Gurindji in many aspects of the non-indigenous bureaucracy. From Hardy we have a detailed account of these times in the book, "The Unlucky Australians" (1968). Other oral history and anthropological accounts are available as a result of this general interest and more specific land claim work (Hokari, 2000; 2002; McConvell, 1976). Coupled with McConvell's (1988a) sociolinguistic account of Kalkaringi in the 1970s, I argue in Chapter 2 that the political activity of the Gurindji contributed to the maintenance of Gurindji in the mixed language. Where other neighbouring groups had shifted to Kriol under the general weight of colonisation, the Gurindji continued to express their identity and resistance through Gurindji Kriol.

In addition to the socio-historical description of the origins and ecology of Gurindji Kriol, Appendix 1 provides a sketch grammar of this language. It gives a rough guide of the phonology, word classes, morphology and basic clause structures found in this mixed language. This chapter is not a full grammatical account of Gurindji Kriol and is merely meant as a reference for reading examples throughout the thesis. Many of the structures described in this chapter are described in relation to their source language, either Gurindji or Kriol, and grammatical information about these source languages is also found in this appendix. Structures which are relevant to this thesis are described in more detail. For

example allomorphic reduction in the nominal morphology (in comparison to Gurindji) and the Kriol functional counterparts of nominal morphology are discussed here.

Chapter 3 begins the focus on case morphology, and in particular an historical account of the development case morphology in Gurindji Kriol. In this chapter I provide an overview of the literature about the response of inflectional morphology to a number of language contact contexts including borrowing, code-switching, pidgin and creole languages, language obsolescence, and mixed languages. I will show that inflectional morphology is often one of the first systems to be affected or lost in language contact, and it provides a good litmus test for the relative strength of interacting languages. Specifically I will show that inflectional morphology is rarely *borrowed* (Appel & Muysken, 1987; Heath, 1978; Thomason, 2003; Thomason & Kaufman, 1988) and is generally only derived from the more dominant language in *code-switching* (Muysken, 2000; Myers-Scotton, 2002). Additionally little inflectional morphology is found in *pidgin and creole languages* (Plag, 2003a; 2003b), even where their lexifier and adstrate languages contain rich inflectional systems. Indeed the paucity of inflectional morphology is a controversial criterion for the classification of these languages (McWhorter, 1998). Finally it is one of the first systems to be reduced or lost in situations of *language obsolescence* (Maher, 1991; Sasse, 1992a). In contrast, I will review the *mixed language* literature to show that inflectional morphology from both source languages can be found in some of these languages, such as Michif and Mednyj Aleut. In the context of other language contact cases, the presence of inflectional morphology from two languages is quite significant and represents a relative equality in the strength of the contributing languages. Such a structural mix is demonstrated in Gurindji Kriol.

Given sensitivity of inflectional morphology to language contact, Chapter 4 explores the mechanisms by which inflectional systems from two languages may be integrated to produce a composite grammatical frame for a new language. This chapter uses Gurindji-Kriol code-switching data from the 1970s and my own Gurindji Kriol mixed language data. I begin with McConvell and Meakins' (2005) observation that code-switching between Gurindji and Kriol was a precursor of the mixed language, which is evidence

against the claim that code-switching cannot lead to mixed language genesis (Bakker, 2003). I build on this observation to explore how the Gurindji and Kriol inflectional systems fused to produce a single morpho-syntactic frame. I show that in the Gurindji-Kriol code-switching, Kriol provides most of the tense and mood marking as well as a restricted set of verbal suffixes in the mixed clause. This grammatical frame is called the "matrix language" (Muysken, 2000; Myers-Scotton, 2002; Treffers-Daller, 1994). Some Gurindji elements such as bare nominals and coverbs seem to be unrestricted in their ability to embed in the Kriol matrix language. However constraints appear to apply to other elements. For example, Gurindji pronominal clitics are never found switched with Kriol free form pronouns, and Gurindji case-marked nominals are also never switched with Kriol equivalents. Case-marked nominals are only found more peripheral to the argument structure of the matrix clause in dislocated phrases. I suggest that *categorial congruence* (Sebba, 1998) plays a role in this patterning, where typological mismatches between Gurindji bound pronominal clitics and Kriol free pronouns restrict switching in this domain, and similarly Gurindji case-marked nominals do not switch with their Kriol counterparts which are not case-marked. Thus where case-marked nominals are found they are only admitted as adjuncts. The result is a composite matrix language which contains significant structural features from both languages - verb morphology and auxiliaries from Kriol and structural and spatial case inflections plus derivational morphology from Gurindji.

Chapter 5 considers these observations about the apparent restrictions on the Gurindji-Kriol code-switching more closely. It examines how elements are incorporated into clause within the debate about whether insertional or alternational code-switching is responsible for the development of mixed languages (Auer, 1999; Backus, 2003; Bakker, 2003; Myers-Scotton, 1988; 2003; Thomason, 2003). The terms insertional and alternational code-switching are derived from Muysken's (2000) work on the typology of code-switching. *Insertional* code-switching refers to the embedding of elements from one language into another language's grammatical frame. On the other hand, *alternational* code-switching tends to occur outside of the argument structure of the clause. Mixed languages are generally considered to bear little resemblance to alternational code-

switching, and this form of code-switching is said to be too unpredictable to grammaticalise into a mixed language (Backus, 2003). Thus insertional code-switching is favoured as the precursor of mixed languages. Nonetheless, as I will show in Chapter 5, Gurindji-Kriol code-switching exhibits both insertional and alternational patterns, and the resultant mixed language has properties which look like the result of the grammaticalisation of these insertional and alternational patterns. Moreover, alternational code-switching is responsible for the presence and incremental integration of Gurindji case-marking in Gurindji Kriol. I will argue that this case-marking began life in the code-switching in adjunct structures, and was slowly introduced in the mixed language clause to produce a composite matrix language.

The integration of Gurindji-derived case marked nominals into the mixed language has not resulted in case marking which is a direct replicant of that found in Gurindji. Changes to the allomorphy, distribution and function of case marking in the development of the mixed language can be observed. Although Gurindji-derived case markers dominate in many constructions in Gurindji Kriol, the Kriol influence on the use of these case markers is also apparent. Chapters 6-9 document the changes in case marking as it grammaticalised in the mixed language. These chapters also show generational differences between the current speakers of Gurindji Kriol which indicate that change is ongoing in the mixed language in this domain. I will examine the results of the interaction of the Gurindji dative marker and Kriol dative preposition in *possessive constructions* (Chapter 6), the Gurindji locative marker and Kriol locative preposition in *topological relations* (Chapter 7), the Gurindji allative and dative marker and Kriol locative and dative preposition in *goal constructions* (Chapter 8), and finally the Gurindji ergative marker and Kriol word order in *argument relations* (Chapter 9). In each case study, I will show how these constructions are marked in Gurindji and Kriol before presenting the composite system in the mixed language. Variation is prevalent in these constructions in Gurindji Kriol; however with statistical methods clear patterns emerge from the data.

First, in the case of *possessive constructions*, Gurindji distinguishes two types of nominals through case marking. As will be shown in Chapter 6, the possessor of an alienable nominal receives dative marking, whereas inalienable nominals such as body parts are simply apposed to the possessor. Kriol makes a similar distinction using the dative preposition *bo* to relate alienable entities to a possessor, and no marking in the case of inalienable entities. Gurindji Kriol uses the Gurindji form of dative marking, the dative case suffix; however it has not adopted its distribution. Thus while nominals which are alienable in Gurindji and Kriol continue to receive the dative suffix in Gurindji Kriol, other nominals which are marked as inalienable in the source languages are found in both dative-marked and unmarked constructions. The loss of the in/alienable distinction cannot be attributed to a Kriol influence as Kriol has overlapping categories of inalienability with Gurindji. It may be that the process of contact itself is responsible for the collapsing of nominal types.

Marking of *topological relations* demonstrates another outcome of the contact between Gurindji and Kriol functional equivalents, as will be shown in Chapter 7. Gurindji marks the locational relationship between two entities, or an event and an entity, using the locative case suffix. On the other hand, Kriol uses a locative preposition, *langa*. In general, the Gurindji case suffix is the most dominant form in Gurindji Kriol with 87% of all topological relations found with a locative case suffix. However double marking using both a preposition and a case marker is the favoured construction of younger speakers of Gurindji Kriol, which indicates that competition between the Gurindji and Kriol forms is ongoing in topological relations, and the influence of Kriol is creeping into this domain.

Chapter 8 will consider *goal marking* in Gurindji Kriol. Gurindji distinguishes animate goals from inanimate goals in the use of case marking. Inanimate goals are allative-marked (with place names optionally unmarked), and animate goals receive allative case marking, dative case marking or a combination of these suffixes. Kriol uses the same locative preposition to indicate goals, *langa*, with some nominals also found optionally unmarked. Animate goals are only distinguished in the distribution of marking. They are never found unmarked. The Gurindji system is used by older speakers of Gurindji Kriol,

with some variation. However a new system used by younger speakers is emerging in Gurindji Kriol which is a fusion of both systems, using the form from one language with the distribution from the other language. Thus inanimate goals are marked increasingly with a Gurindji locative case suffix by younger speakers, despite the fact that locative marking is not used to indicate goals in Gurindji. This pattern is the result of mapping the Gurindji locative case suffix onto a Kriol pattern, which does not distinguish between location and goal relations. Similarly younger speakers of Gurindji Kriol are increasingly using the Kriol dative preposition to mark animate goals, despite the fact that this form is not used in Kriol in this domain. Again the Kriol form is used with a Gurindji distribution which marks animate goals, indirect objects and benefactors with the same dative case-suffix. These patterns of marking again show the continuing incursion of Kriol into the nominal system of Gurindji Kriol in both form and distribution.

Finally in Chapter 9 I document the shift of the ergative case suffix from indicating only argument relations in Gurindji to marking both this function and discourse structure in Gurindji Kriol. Gurindji uses case morphology, and in particular the ergative case suffix to indicate argument relations, whereas Kriol uses word order. Both systems are used in Gurindji Kriol; however the ergative marker is no longer obligatory as it is in Gurindji. I will argue that the optional nature of the ergative marker in Gurindji Kriol is the result of functional competition between these two systems of argument marking. The result of this competition is that word order is the main means of distinguishing between arguments, though the ergative marker continues to contribute less directly to argument marking in ways that are similar to animacy and world knowledge. Finally I will also propose that the continuing presence of ergative marking in (i) transitive clauses where word order is sufficient for argument identification and in (ii) intransitive clauses where disambiguation is not necessary suggests that other variables motivate its optionality, namely a pragmatic cluster of factors related to discourse encoding and prominence. I suggest, in this chapter, that the main function of the ergative marker in Gurindji Kriol is to highlight the agentivity of a subject nominal.

Chapter 10 provides some concluding remarks by drawing the two strands of this thesis together - the development of case morphology in Gurindji Kriol (§3-§5), and the present function of this component of the mixed language system (§6-§9). Case morphology in Gurindji Kriol provides a unique opportunity to study the formation of a mixed language because this system continues to demonstrate flux, where other systems such as the verb phrase have stabilised to a large extent. I take the language evolution approach of Croft (2000) as a starting point to suggest that a process of contact and competition mediated between Gurindji-Kriol code-switching and the resultant mixed language, and continues to operate in the Gurindji Kriol today. This process began at the code-switching stage where potential switch sites were created as a result of perceived matches between elements in the interacting languages. With respect to case-marked nominals, these elements corresponded with functional equivalents from Kriol such as prepositional phrases, and were typologically compatible. Thus potential switch sites were the points of friction between Gurindji and Kriol with the result of competition between functional equivalents. Through the process of competition, variation played an important role as both a result of competition and a factor that drives ongoing change in the mixed language. More specific results of this competition were demonstrated in §6-§9 - whilst Gurindji case markers dominate in most functional domains, changes in their functional distribution (§6), double-marking (§7), the convergence of form and function (§8), and a functional shift (§9) can also be observed. Thus, whilst Gurindji appears to be the stronger language in the noun phrase, these case markers also show some genetic heritage with Kriol. This process of contact and change is ongoing with differences in the use of case marking observed across age groups (if age can be taken as an indicator of change over time). The effects of Kriol are more clearly observed in the speech of Gurindji teenagers and children, as opposed to older groups. Whether further change will occur or these systems will systematise remains a question for future investigations.

1.5 The classification of Gurindji Kriol as a mixed language

In this section I demonstrate that the language contact variety that I am describing can be reasonably classified as a mixed language rather than another outcome of contact, such as code-switching. The classification of Gurindji Kriol as a mixed language will become important for subsequent analysis. For example the chapters which chart the development of the mixed language from code-switching origins are of little consequence if it can be argued that what I describe as a mixed language is really a form of code-switching. Unfortunately the classification of mixed languages is a somewhat fraught task. I approach this issue from two angles: first I examine various criteria which have been offered for the classification of mixed languages and discuss where Gurindji Kriol can be situated in relation to other mixed languages. Secondly I offer evidence which demonstrates how Gurindji Kriol differs from other contact varieties, and in particular code-switching.

1.5.1 Gurindji Kriol in relation to other mixed languages

First, a number of general definitions have been used to identify mixed languages. The earliest definition was that of *genetic ambiguity*. Thomason and Kaufman (1988) argue that mixed languages can be classified on the basis of their non-classification in historical terms. That is, mixed languages are deemed to have no clear genetic heritage and cannot be classified according to standard historical methods. This definition is still used by Thomason (2001, p. 198), and has some basis; however this criterion does not distinguish mixed languages from creole languages which are also often claimed to have an unclear genetic heritage (though see Mufwene (2001) and DeGraff (2005) for good arguments against this claim). Another way of framing the notion of genetic ambiguity is to say that mixed languages have two clear parents. This criterion relates to another general characterisation of mixed languages - they are said to be the product of contact between only *two* languages (McWhorter, 2005, p. 253). Indeed it seems to be the case that most identified mixed languages only have two parents, in contrast, for example with pidgin and creole languages which usually have one clear lexifier parent and a number of other source languages. In the case of Gurindji Kriol, the name given to the language reveals its

dual genetic heritage. Of course, one of its source languages which is a creole language, Kriol, clearly finds its roots in English but also a number of adstrate languages, which depend on the region where the variety of Kriol is spoken.

Mixed languages have also been defined in sociolinguistic terms. For example, they contrast with creole languages in their purpose which is *expressive* rather than communicative (Golovko, 2003, p. 191; Muysken, 1997b, p. 375). This social definition argues that pidgin and creole languages are borne out of the need for communication between people of a number of language groups, whereas mixed languages are created in situations where a common language already exists and communication is not at issue. Thus the mixed language serves as an expression of an altered identity, be it new, or differing significantly from an older identity. As I will argue in §2.5, Gurindji Kriol is spoken by Gurindji people who had no need for a new language to communicate with. Gurindji was already fulfilling this function. Thus Gurindji Kriol marks an identity shift for younger Gurindji people who simultaneously express their continuing Gurindji heritage coupled with a more modern Aboriginal identity in the mixed language.

These very general definitions go some way to identifying cases of unusual language mixing. More specific attempts at a classification have only occurred more recently. The main classification system comes from Matras and Bakker (2003), who posit six types of mixed languages based on the mixed language speakers' knowledge of the source languages, the level of functionality of the mixed language, the typology of its structure, and various social factors. The six types that emerge are plain, conventionalised, special lexicon of foreign origin, radical restructuring, mixed creole and extremely heavy borrowing. Matras and Bakker describe *plain* mixed languages as having a high level of functionality in a language community (i.e. they exist as an L1 in everyday usage) and as having lost contact with the source languages. Michif is the only example of a plain mixed language. Though only spoken now by older generations, it has an everyday use for those speakers, and they do not know French or Cree. Note though that English is now the main community language. *Conventionalised* mixed languages include Mednyj

Aleut⁵ and Media Lengua. These mixed languages are usually spoken alongside one of their source languages. For example, Media Lengua, which is spoken by some Quechua groups in Central Ecuador, mixes a Quechuan grammar with Spanish words (Muysken, 1997b). Younger Media Lengua speakers often also speak Spanish natively and older speakers, Quechua. Conventionalised mixed languages also emerge in situations of full bilingualism. Ma'á, the Para-Romani dialects, Lekoudesch, Callahuaya and Abdal/Aynu comprise the *lexicon of foreign origin* category. Like the other categories, these languages mark an in-group identity and arise from situations of mixed parentage; however they are secret in nature and not in everyday use and are therefore at the lower end of the functionality continuum. For example, Lekoudesch, which mixes a Judeo-German dialect with Ashkenazic Hebrew, is the secret language of Jewish cattle traders in Germany. *Radically restructured* mixed languages consist of lexemes from one language which have been 'rearranged' according to the grammar of another language. Thus on the surface they appear to be one language, but structurally they are entirely different language. For example Javindo maps a Dutch lexicon onto a Javanese grammar, resulting in severe genetic ambiguity and a greatly simplified morphological system. Chavacano and Berbice Dutch are classified as *mixed creoles* because these Spanish and Dutch-based creoles are also influenced by other languages in the form of vocabulary and some syntactic features. The most marginal group of mixed languages derive from *extremely heavy borrowing*. Unlike conventionalised mixed languages they do not form from situations of bilingualism, and are more easily classified genetically. These mixed language types are summarised in the table below:

⁵ Mednyj Aleut is discussed further in §2.6.1 and §3.5.

Figure 2 Matras and Bakker's (2003) classification of mixed languages

TYPE	DESCRIPTION	EXAMPLE	SOURCE LANGS	PLACE
PLAIN	<ul style="list-style-type: none"> • high functionality • lost contact source langs 	Michif	French (NP) Cree (VP)	Canada/US
CONVENTIONALISED	<ul style="list-style-type: none"> • source lang also spoken • emerged through bilingualism 	Mednyj Aleut	Aleut Russian	Copper Island
		Media Lengua	Quechua (gram) Spanish (lex)	Ecuador
		Chindo/ Peranakan Chinese	Javanese (gram) Malay (lex)	Indonesia
SPECIAL LEXICON OF FOREIGN ORIGIN	<ul style="list-style-type: none"> • lower functionality • secret language 	Ma'á/Mabugu	Mbugu (gram) S. Cushitic (lex)	Usambara, Tanzania
		Para-Romani	English/Spanish etc (base) Romani (some lex)	Western Europe
		Lekoudesch	Judeo-German (base) A. Hebrew (some lex)	Germany
		Callahuaya	Quechua (base) Puquina (some lex)	Bolivia
		Abdal/Aynu	Turkic (base) Persian (some vocab)	Anatolia
RADICAL RESTRUCTURING	<ul style="list-style-type: none"> • genetically ambiguous • structurally more varied 	Javindo	Java (gram) Dutch (lex)	Java
MIXED CREOLE	<ul style="list-style-type: none"> • based on a creole with secondary influence 	Chavacano	Spanish Creole (lex & gram) Austronesian (syn)	Mindanao, Philippines
		Berbice Dutch	Dutch (base) E. Ijo (lex and some affixes)	British Guyana
HEAVY BORROWING	<ul style="list-style-type: none"> • not derived from bilingualism • genetically classifiable 	various		

Gurindji Kriol straddles two categories: *conventionalised* mixed languages and *mixed creoles*. In terms of the language ecology in which it is spoken, it fits into the *conventionalised* set of mixed languages because it has not yet lost contact with its source languages, and emerged from a highly bilingual environment. Unlike these languages, it

also has a high level of functionality, for example it is the main language of the community and the language acquired by Gurindji children. Gurindji Kriol also represents a secondary level of contact, in that it is a creole language which has restructured as a consequence of contact with another language. This discussion continues in §2.3. Finally, Gurindji Kriol finds little in common with the other categories. For example, as it is still spoken alongside its source languages, it cannot be classified as a *plain* mixed language - though it shares its high level of functionality with this category. It also contains lexemes from both languages, which discounts it from the *radical restructuring* class. Similarly structural material derived from both languages means that it cannot be considered a *special lexicon* language, or a case of *heavy borrowing*.

The categories set out by Matras and Bakker are based fairly broadly on a range of social, typological and genetic features. Later in the same volume, Bakker (2003) has another pass at classifying mixed languages, this time purely on structural grounds. He suggests that:

Mixed languages can be set apart on synchronic grounds both from non-mixed languages and from other results of language contact such as pidgins, creoles, languages with extreme borrowing and code-switching. The mixed languages (at least some types) differ so radically from other results of language contact that they show more similarities with each other than differences, while there are no systematic similarities with other types of contact languages. (Bakker, 2003, p. 108)

He divides mixed languages into three subgroups: L-G mixed languages, converted languages and lexically mixed languages. As was said in §1.2, *L-G languages* comprise the first and by far the largest category. These languages are characterised by a clear division between the lexicon and the grammar where these systems are each dominated by a different source language. Bakker (2003, p. 109) suggests that in L-G languages around 90% of the lexicon derives from a language other than the grammar language. These figures are largely arbitrary, based on an estimate made by Bakker and Mous 10 yrs previously (1994, p. 5). Since then the language distribution of some mixed language lexicons has been measured; however no real attempt at measuring grammatical features

has occurred. Definite figures such as 90% are also problematic because some of the *L-G languages* Bakker identifies also exhibit large degrees of variation. For example, the varieties which are labelled Para-Romani mix the grammar of, for example, English or Spanish, with a Romani lexicon; however different degrees of Romani vocabulary can be used:

... Para-Romani today is best described as a style of speech, consisting of occasional lexical insertions into utterances in the majority or dominant (non-Romani) language. Speakers with a knowledge of a fairly large Romani-derived vocabulary will, however be in a position to produce, on demand, sentences showing a maximum density of such insertions ... (Matras & Bakker, 2003, p. 8)

Regardless of the arbitrary numbers, which are given to these grammar-lexicon splits, there does seem to be a distinct category of mixed languages which are structured along this grammar-lexicon divide. It is by far the largest category, containing around 25 documented cases, including Media Lengua (Quechua grammar, Spanish lexicon), Angloromani (English grammar, Romani words) and Ma'á (Bantu grammar, Cushitic core vocabulary).

The second type of mixed language, *converted languages* is a newly identified category by Bakker (2003, p. 116). In converted languages, all of the lexical and grammatical morphemes are derived from one language; however the syntactic and semantic structure is based on a second language. Modern Sri Lanka Malay (SLM)⁶ is one such example. SLM is spoken in Sri Lanka by the descendants of people brought to Sri Lanka from Indonesia and Malaysia by Dutch and British colonial administrations (Smith & Paauw, 2006, p. 160). Typologically, it has converted from a prepositional SVO creole language (Bazaar Malay) into an agglutinating, postpositional SOV language under the influence of Tamil (Bakker, 2003, p. 118). The resulting language is composed of almost entirely Malay morphemes, yet also contains the semantics and grammar of Tamil. This description partly matches that of a creole language, and indeed Smith et al (2003; Smith & Paauw, 2006; 2004) classify it as such. They suggest that SLM is a creole language

⁶ The structure of Sri Lanka Malay including case marking and the TAM systems is discussed further in §3.5.

which has acquired case marking, however, as Ansaldo (2005), notes the socio-historical development and morphological complexity of SLM does not lend itself to creole categorisation.

Thirdly, Bakker (2003, p. 121) also posits a class of *lexically mixed* languages which mostly includes some pidgins and creole languages, such as Russenorsk and Berbice Dutch, which have equal lexical contributions from their input languages. Other non-creole languages are included in this class, for example Michif which exhibits a lexical split largely along verb-noun lines. He calls this a V-N mixed language (Bakker, 2003, p. 122). This is a curious class of mixed language given that he explicitly rejects Thomason's inclusion of pidgin and creole languages in her classification of mixed languages (Bakker, 2003, p. 108). Moreover this class is quite dissatisfying as it seems to be purely defined by lexical content with the result that languages which have very different socio-historical origins and are structurally very different (for example Berbice Dutch is an isolating language, and Michif is largely agglutinating) end up in the same category. A couple of left-over languages defy classification. This category includes Mednyj Aleut which contains neither a clear grammar-lexicon divide, no evidence for conversion and is not lexically mixed.

Typologically Gurindji Kriol fits best into the category of V-N mixed languages, a subclass of lexically mixed languages. As was noted above - Michif is included in this category as it exhibits a lexical split between Cree (VP) and French (NP). Michif takes this split further with a structural split between the verbal (Cree) and nominal systems (French). Gurindji Kriol bears some resemblance to Michif, in terms of its V-N structural split, however, as was introduced in §1.2, the lexicon is not distributed according to a V-N division but spread across these domains. Light Warlpiri has also been classified as a V-N split for similar reasons (O'Shannessy, 2006). The structure and lexicon of Gurindji Kriol was outlined above and is described in more detail in §A1.

In conclusion, the category of 'mixed language' contains a diverse range of structural mixes, which derive from varied socio-historical backgrounds. Nonetheless Gurindji

Kriol patterns closely with a number of these languages, both typologically and sociologically, and, in this respect, it can be described as a mixed language. On the most fundamental level, Gurindji Kriol is a mixed language because it cannot be classified according to standard historical methods due to its dual genetic heritage (Thomason, 2001). It was also born out of an expressive rather than communication need, which Muysken (1997b) suggests is another general characteristic of mixed languages. A common language, Gurindji, was already being spoken at Kalkaringi. Thus Gurindji Kriol was not required for communicative purposes, but marked a new Gurindji identity which combined the tradition of the Gurindji with a more modern pan-Aboriginal identity. More specifically, the bilingual circumstances of its genesis and current language environment is similar to other mixed languages, such as Mednyj Aleut and Media Lengua, which have been classified as conventionalised mixed languages. It also bears some resemblance to mixed creoles, such as Javindo and Sri Lankan Malay, which are cases of second degree contact, where mixing with another language has occurred subsequent to creolisation. Finally the structure and lexicon split of Gurindji Kriol follows similar patterns found in Michif and Light Warlpiri. Thus Gurindji Kriol can be classified as a mixed language using general criteria, and according to comparisons with other mixed languages. Nonetheless, differences, some of which have already been identified, are also apparent, and it is these differences which make Gurindji Kriol an interesting addition to this class of contact language.

1.5.2 Gurindji Kriol: an autonomous language system or code-switching?

Though Gurindji Kriol may be described in relation to shared socio-historical, structural and lexical features of other mixed languages, much of the structure resembles patterns which may also be found in cases of code-switching. This similarity casts some doubt on the 'language-ness' of Gurindji Kriol. Indeed I have already suggested that there is a close diachronic and synchronic relationship between these forms of language mixing.

Historically this type of code-switching most likely led to the formation of the mixed language, and synchronically the mixed language and code-switching co-exist within the same speaker population. Yet, despite the symbiotic nature of these types of language

mixing, they can also be distinguished. In this section, I provide evidence for the existence of an autonomous language, and criteria that allows the identification of mixed language clauses which differ from code-switching.

Similar work on other mixed languages has used the presence of structures which are not found in the source languages, or "unique linguistic properties" (Thomason, 2003, p. 25) as a basis for differentiating these two forms of language mixing. For example, in Light Warlpiri, O'Shannessy (2005, p. 39) identifies a unique auxiliary system consisting of a pronominal proclitic and a tense-aspect element. This system is based on Kriol morphemes but has a Warlpiri flavour to the structure, since Warlpiri also has a single auxiliary structure which combines these elements, although in the reverse order.

Gurindji Kriol does not contain any systems which are unique to the mixed language⁷; however I use three criteria to demonstrate that there is an autonomous language which may be called Gurindji Kriol: (i) inter-speaker consistency in the linguistic representation of events, (ii) the use of elements in ways that differ from the source languages, and (iii) the presence of structural features from both languages in a clause⁸. Actually labelling individual clauses as mixed language clauses or code-switching clauses is a less easy task. There is a large grey area where mixed language clauses are neither well-defined as Gurindji Kriol or indeed eliminated from this categorisation. I discuss how I treat these clauses.

⁷ In fact I argue later that a similar auxiliary system may be emerging for Gurindji Kriol but has not yet regularised across the pronoun paradigm. However the nature of this system is puzzling given that Gurindji does not have a comparable auxiliary system. Thus it may be the case that there is some influence from Light Warlpiri into Gurindji Kriol. Nonetheless this system can best be described as emergent and therefore is not presented as evidence for a unique system here. See §A1.11.2 for more detail about this system.

⁸ The background to this criterion is the rarity of finding significant structural elements such as verbal grammar or inflectional morphology from two languages combined within the one language system. One language usually dominates and provides this structural material. This issue forms the topic of §3.

First, the degree of consistency in representing events exhibited in Gurindji Kriol is very high. Though variation exists and is relevant⁹, Gurindji Kriol speakers use virtually identical constructions to express events. The choice of lexical items and syntactic constructions is very consistent across speakers. This point can be demonstrated looking at a small subset of peer elicitation data. In this data, speakers produced sentences in response to picture stimuli (§1.6.3.1.3.1). Considering just one example: "the dog bit the man on the hand". This sentence appears 18 times from different speakers with a full nominal is used for "the dog", "the man" and "on the hand". Lexically, the choice of words is almost identical. Of these 18 sentences, the Gurindji word *warlaku* (the dog), *marluka* (old man) and *wartan* (hand) was used in all 18 sentences, with the Kriol *baitim* (bite) used in 89% of sentences in variation with the Gurindji equivalent *katurl*. Syntactically all pronouns present are Kriol-derived free forms, and similarly any verbal inflection found is of Kriol origin. The Gurindji-derived ergative marker *-ngku* is used in 61% of the sentences, and the locative marker *-ta* is found 83.5% of the time, with the Kriol preposition *la* used in the remaining sentences. There is some variation in word order. AV order is only used in 66.5% of cases in this set, compared with 87.5% overall (see §9.4); however I suggest this is largely an influence of the ordering of entities in the stimulus item - the old man is found on the left side with the dog on the right.

(3)	det	<i>warlaku-ngku</i>	i	bin	bait-im	<i>marluka</i>	<i>wartan-ta</i> .
	the	dog-ERG	3SG.S	NF	bite-TRN	old.man	hand-LOC
		↑ ↑	↑	↑	↑	↑	↑ ↑
		100% 61%	100%	100%	100%	100%	100% 83.5%

This data, including the stimulus picture, is shown in Appendix 3. Unfortunately I do not have equivalent code-switching data for comparative purposes. It is the case that in highly conventionalised cases of code-switching, there is a high degree of inter- and intra-speaker consistency. However I suggest that the level of uniformity in lexical and syntactic choices shown by Gurindji Kriol speakers supports its status as a language independent of its sources.

⁹ Variation and its significance for formation and development of the mixed language is discussed in §10.3, and the four studies of case markers examine the issue of variation in more detail (§6-§9)

Secondly many constituents of the Gurindji Kriol clause function in unique ways which contrast from their language source. In code-switching, the use of switched constituents generally does not differ radically from monolingual clauses, though prolonged coded-switching may result in the convergence of language systems. In the case of Gurindji Kriol, the development of Gurindji and Kriol elements in the mixed language has not extended to the source languages. Gurindji and Kriol systems, which have been altered in the mixed language, continue to be used unchanged in the source languages. I suggest that this demonstrates that these developments are a feature of the mixed language. To begin with, the new uses of Gurindji-derived case markers which I began to describe in §1.4 distinguishes the mixed language from code-switching. For example, whereas Gurindji marks transitive subjects with an ergative marker obligatorily (see §A1.2.1), Gurindji Kriol is an *optional* ergative language. The ergative marker only appears on transitive subjects 66.5% of the time and its use is affected by clause transitivity, clause structure and information packaging. The ergative marker is also found on intransitive subjects in Gurindji Kriol, as is shown in (4), where it is not found here in Gurindji. This use of the ergative marker is unique to Gurindji Kriol and will be discussed in more detail in §9.

- (4) jamting-*tu* nyimparuk jeya jamting-*tu*.
 something-ERG go.under.water there something-ERG
 "Something went under water there!" (FM029.B: SS18yr: Conversation)

The distribution of the locative marker in Gurindji Kriol also differs from Gurindji. As I said above, whereas Gurindji distinguishes between locative and allative case, the Gurindji-derived locative marker is beginning to emerge as a general spatial case marker in the speech of younger Gurindji people (§7). For example in (5) the locative marker is used to mark a goal.

- (5) dei bin gu-bek nyarruluny hawuj-*ta*.
 3PL NF go-back 3PL.DAT house-LOC
 "They went back **to** their house." (FM010.A: AC11yr: Conversation)

Other case markers in Gurindji Kriol also pattern differently from their source language, Gurindji. For example, in Gurindji Kriol a dative marker may be used to relate a body part to its whole, as in (6). In both Gurindji and Kriol the relationship between body parts and their whole is indicated through simple juxtaposition. In this respect, a class of inalienable nouns which includes body parts and some other nominals such as bodily products and shadows is distinguished from an alienable class of nouns. No distinction is made in Gurindji Kriol. More detail about the behaviour of the dative marker in possessive constructions is provided in §6.

- (6) *kajirri-ngku* *i=m* *kat-im* *jawurt* *kengkaru-yu.*
 old.woman-ERG 3SG.S=NF cut-TRN **tail** **kangaroo-DAT**
 "The old woman cuts off **the kangaroo's tail.**"
 (FHM143: LS20yr: Ergative bingo)

Case marking also demonstrates other ways in which Gurindji Kriol looks unlike its source language. In Gurindji Kriol, a passive exists which uses the Gurindji-derived ablative marking to mark the agent. No such passive exists in Gurindji. However a *get*-passive can be found in Kriol, where the agent is headed by an ablative preposition, *brom* (from). This *get*-passive structure is an example of the convergence of two language systems where the Gurindji form has been mapped onto a Kriol structure. More information about this construction can be found in §A1.14.2.7.

- (7) *man i* *bin* **ged bait** *warlaku-nginyi* *wartan-ta.*
 man 3SG.S NF **get bite** dog-ABL hand-LOC
 "The man **got bitten** on the hand **by** a dog."
 (FHM069: LS20yr: Ergative pictures)

The use of case marking in Gurindji Kriol also differs from Gurindji in the formation of relative clauses. The reduction in case marking allomorphy has contributed to a new means of marking relative clauses. Syncretism now exists in the dative and ergative paradigm with the same form *-tu* used to mark consonant final stems¹⁰. Thus *-tu* can be found under-specified for case and simultaneously able to mark an entity's function as an

¹⁰ For more information about ergative and dative allomorphic reductions, see §A1.6.3.1.1 and §A1.6.3.1.2, respectively.

indirect object or goal nominal and the subject of a transitive clause, thereby creating a relative clause, as is shown in (8):

- (8) det *karu* bin gon det ***mukmuk-tu*** *tiwu-karra* la=im bo det *karu*.
 DET child NF go DET **owl-??** fly-CONT OBL=3SG.O PREP DET child
 "The kid went to **the owl** who flew at the kid." (FM052.C: RR23yr: Frog story)

This construction is not possible in Gurindji because Gurindji uses different consonant final allomorphs for ergative and dative marking. The *-tu* is always a C-final ergative marker in Gurindji, with *-ku* the dative form. Moreover there is no other syncretism in the case-marking paradigm. Thus the use of case-marking is never under-specified, which means that the construction found in (8) is impossible in Gurindji. Instead Gurindji uses case marking on the second coverb to construct a relative clause, also a strategy available to Gurindji Kriol speakers. The relative clause created by under-specifying case-marking now can be seen across other argument structures in Gurindji Kriol. For example in (9) *mawujimawuji* (mouse) is not marked for case, and is under-specified for case, I argue. Therefore it simultaneously acts as the direct object of the previous clause and the intransitive subject of the next clause. This utterance is found within the same intonational unit.

- (9) i=m faind-im **mawujimawuji** *jik* hol-*nginyi-ma*.
 3SG.S=NF find-TRN **mouse** emerge hole-ABL-TOP
 "He found **a mouse** emerging from the hole." (FHM149: RS20yr: Frog story)

Gurindji Kriol differs in other ways from its source languages. Another example of the way Gurindji constituents operate in a distinctive manner in Gurindji Kriol can be found in noun phrase marking. In Gurindji, all of the elements of a noun phrase agree with each other in case marking. However, in Gurindji Kriol, only the head of the noun phrase is marked. For example in (10) only "dog" receives the ergative suffix and not "one". In Gurindji "one" would have also received ergative marking. More information about head marking can be found in §A1.6.1.

- (10) *jintaku warlaku-ngku i bin bait-im im marluka.*
 one dog-ERG 3SG.S PST bite-TRN 3SG.O old.man
 "One dog bit the old man." (FHM052: AC11yr: Ergative bingo)

The use of Kriol-derived elements in Gurindji Kriol also differs from that in Kriol. For example, in Kriol, indirect objects in semi-transitive clauses involving "talk", "listen" and "look" verbs are marked with the locative preposition *langa*. However in Gurindji Kriol, the dative preposition *bo* is used. This follows the Gurindji pattern of marking indirect objects with the dative suffix. For example, in (11) "bird" receives a dative preposition which marks it as the indirect object.

- (11) det *karu* bin tok **bo** det *jurlaka.*
 DET child PST talk **PREP** the bird
 "The kid talked **to** the bird." (FHM145: CA19yr: Bird story)

Gurindji Kriol also differs from Kriol in reflexive and reciprocal constructions. Kriol distinguishes these constructions using the pronoun *mijelp* (<myself) for reflexive constructions regardless of person and number, and *gija* (<together) for reciprocal constructions (Sandefur, 1979, p. 92-94). On the other hand, Gurindji Kriol has collapsed this distinction using one form, *mijelp*, to indicate both meanings. For example in (12), *mijelp* functions as a reciprocal pronoun whereas in (13) it is operating as a reflexive pronoun in both clauses.

- (12) "*watja watja*" jei bin tok **mijelp** *nganta.*
 hurry hurry 3PL.S NF talk **RECIP** DOUBT
 " 'Hurry hurry,' I reckon they were saying **to each other**."
 (FHM028: TJ22yr: Elicitation)

- (13) ib yu *karan-karra* **mijelp** hard-wan-tu
 if 2SG scratch-CONT REFLEX hard-NOM-ERG

 yu-l meik-im **mijelp** *kungulu.*
 2SG-IF make-TRN REFLEX bleed
 "If you keep scratching **yourself** hard, you make **yourself** bleed."
 (FHM028: TJ22yr: Elicitation)

The examples above demonstrate just some of the ways in which elements from Gurindji Kriol's source languages operate in different ways in the mixed language. Through these differences Gurindji Kriol can be shown to be an autonomous language rather than two separate language systems. In the case of code-switching, both languages are active to varying extents (for example, more so in alternational code-switching than insertional code-switching), and therefore elements from both languages are used in the language mix as they are in monolingual clause. If Gurindji Kriol were merely an example of code-switching, the operation of various elements of the clauses would be expected to be much like the source languages.

The second marker of a Gurindji Kriol clause is the presence of structural elements from both languages. This criterion applies even where the structural elements do not differ from their source languages in function, because, as has been said above, and will be explicated in §4, this type of pattern is not found in the code-switching. In the code-switching only Kriol provides the structural frame. Thus in (14) all elements in the clause behave as they would in the language they derive from; however this clause is distinctively Gurindji Kriol because it contains both Gurindji and Kriol structures. For example, the dative marker relates two alienable nouns which is similar to Gurindji, and the auxiliary and transitive marking patterns as it would in Kriol.

- (14) yu bin bast-im ngakparn-ku hawuj.
 2SG NF break-TRN frog-DAT home
 "You broke the frog's home." (FM054.C: CA19yr: Frog story)

In this respect clauses which have very little mixed lexical content may be classified as Gurindji Kriol, as long as a composite structure is clear. For example, in (15) below, though most of the lexemes including inflectional and other morphology, =*in* (past tense marker), and *-im* (transitive marker), are derived from Kriol, the presence of the Gurindji locative marker, *-ta*, is enough to identify this utterance as Gurindji Kriol. Similarly, though (16) contains almost all Gurindji lexemes, inflectional morphology from both languages is present, for example case-marking from Gurindji, and the past tense marker from Kriol, showing it to be a Gurindji Kriol utterance.

- (15) fut-*ta* im=in bait-im.
 foot-LOC 3SG=PST bite-TRN
 "It bit him **on** the foot." (FHM132: CR54yr: Locative pictures)

- (16) karu **bin** lungkarra-p marluka ngarlaka-ngka.
 child PST cry-ACT old.man head-LOC
 "The child **was** crying on the old man's shoulders."
 (FHM018: CE25yr: Ergative bingo)

Nonetheless this composite criterion is problematic as a general measure because nominals are optional in both Gurindji and Kriol, which means that the potential for case-marking is not always realised in the clause. The optionality of nominals produces many utterances which are indistinguishable from Kriol, such as (17). Thus the absence of structural elements from both languages is not a criterion for a clause to be eliminated from the Gurindji Kriol corpus. In any case, these utterances are not problematic for this thesis because I focus on case-morphology or the potential for marking nominals, and clauses without nominals are therefore not counted in any of my analyses.

- (17) i bin bait-im im
 3SG.S NF bite-TRN 3SG.O
 "It bit him." (FHM124: RS20yr: Ergative sentences)

Nonetheless, there are many clauses in my recordings where a composite structure is difficult to demonstrate, and where all of the parts of the mixed clause behave as they would in the source languages. These clauses are virtually impossible to distinguish from code-switching, and are problematic for the identification of Gurindji Kriol clauses in this respect. For example, in (18) the goal nominal *Lajamanu* is a place name that is unmarked. In both Gurindji and Kriol place names are optionally unmarked in goal constructions. Thus this sentence may be considered a case of code-switching between Kriol and Gurindji, with the Gurindji nominals *jintaku kirri* (one woman) inserting into a Kriol matrix language (verbal structure from Kriol), or it may be considered a mixed language clause. No part of this sentence behaves any differently from the source languages, thus it is not clear how to treat it.

- (18) *jintaku kirri i=m gon Lajamanu.*
 one woman 3SG.S=NF go PLACE.NAME
 "One woman went **to Lajamanu.**" (FHM121: CE25yr: Allative pictures)

Also problematic are clauses which contain lexemes from only one language, where all of the elements behave as they would in their source language. However rather than being considered a token of that language, they can be only classified as Gurindji Kriol by negative criteria. For example, (19) is an apparently monolingual Gurindji utterance. Despite containing only Gurindji lexemes, this sentence would be considered a Gurindji Kriol token, rather than a monolingual Gurindji utterance, because it does not contain the Gurindji inflecting verb and bound pronoun structure which would be present in Gurindji, as in (20). It also shows no case agreement within the noun phrase.

- (19) *kajirri jintaku jarrakap-karra nyanuny ngumparna-wu.*
 old.woman one talk-CONT 3SG.DAT husband-DAT
 "One old woman is talking to her husband." (FHM037: CE25yr: Dative pictures)

- (20) *kajirri jintaku ngu-rla jarrakap-karra ma-rnana*
 old.wom one CAT-3SG.DAT talk-CONT say-PRS.IM

nyanuny-ku ngumparna-wu.
 3SG.DAT-DAT husband-DAT
 "One old woman is talking to her husband."

More problematic are examples such as (21) whose status is ambiguous due to the use of the Kriol preposition at the end of the utterance. I said in the general overview of the structure of Gurindji Kriol that Gurindji is responsible for the noun phrase structure. However here is a Kriol preposition used in a way which reflects that of its source language. Thus it is not clear in this utterance whether the use of the preposition represents a code-switch or is a part of the larger language system of Gurindji Kriol.

- (21) *warlaku-ngku bait-im wan marluka la watan.*
 dog-ERG bite-TRN a old.man PREP hand
 "The dog bites a man **on** the arm." (FHM051: JV11yr: Ergative pictures)

Thus there are clauses which can definitely be identified as a mixed language on the basis of their composite structure and the uniqueness of the function of particular elements. However there is also a grey area containing clauses which are not clearly Gurindji Kriol or code-switching. For the purposes of my analysis, particularly in §6-§9, I have chosen to include all mixed clauses in the analyses, including ambiguous clauses such as those given above. The aim of my approach is to be as inclusive as possible, and to make as few assumptions about what should and should not be classified as Gurindji Kriol, the mixed language. In many cases, utterances which cannot be differentiated from code-switching are revealed to operate within a larger language system which is drawn out in the analysis. In this respect it is important not to discount these clauses from a description of the language system.

1.6 Participants, data and methodology

This PhD project forms a part of the Aboriginal Child Language (ACLA) project¹¹ headed by Gillian Wigglesworth, Jane Simpson and Patrick McConvell through the University of Melbourne. The ACLA project is a longitudinal study of child language input in three Aboriginal communities in north Australia, including Tennant Creek, Yakanarra and Kalkaringi, with comparisons made with Lajamanu. The aim of the ACLA project is to map the community languages and mixing strategies which children are exposed to and acquire. The ultimate interest of the ACLA project is how acquisition occurs in a multilingual and changing language environment where language mixing is found at all levels and large intergenerational differences in language use can be observed. The project has been running for four years in these communities and the data collection phase is complete. Every six months, 5-7 focus children in each community were recorded interacting with various members of their family. Our aim was to capture both child-directed speech and peer conversation from a number of age groups. Pending further funding, we will continue to track the same children and their language use. I have coordinated and collected the data for the Kalkaringi section of the project. My PhD project uses some of the data collected for the ACLA project; however specific data was

¹¹ <http://www.linguistics.unimelb.edu.au/research/projects/ACLA/index.html>

also recorded to address the aims of this thesis. In this section, the discussion of participants and methodology relates specifically to my own project.

I recorded data for my project during ACLA field trips. The field trips were conducted at roughly 6-month intervals for the longitudinal study of child language input. The data was collected during seven field trips, with each trip approximately one month in duration (May 2003, October 2003, March 2004, September 2004, March 2005, September 2005, June 2006). Approximately 80 hours of data was collected and transcribed, with this data forming the basis of my analysis.

1.6.1 Participants

58 women, teenagers and girls participated in this project. Male speakers are not represented at all in the data (except as under 5 years olds). It is likely that gender differences are present and relevant; however it is not within the scope of this study to consider these differences. The predominance of female speakers is partly the result of the association of my own project with the ACLA project, and partly because it would have been culturally inappropriate to work with young men. Most of the women were recruited in association with the ACLA project. They are the mothers, sisters and grandmothers of the ACLA focus children. Although men are involved in child-rearing, this activity is largely the domain of women hence the large proportion of female speakers. Working with young men would have also been socially awkward because young men and women generally only socialise within larger groups. It is not appropriate for a woman to spend much time alone in a group of men. However it is not unusual for female linguists to work with Aboriginal men in general. In these cases the men are much older and respected for their language abilities. With respect to my project, I worked with much younger people whose language skills were not considered noteworthy by the community. I mostly worked with speakers under the age of 35 because their main language is Gurindji Kriol. This language has little status in the community and therefore this age group is not respected for their language skills. Thus working with young men would have been both socially awkward and linguistically inexplicable from the Gurindji

perspective. Langlois (2004, p. 24) encountered similar gender problems working with teenage girls in Areyonga, a Pitjantjatjara community in central Australia.

The table below shows the distribution of participants across age groups. As the data was collected over 4 years, some participants have moved up an age group. To avoid this problem, I have classed participants according to their age when the project started. This ensures that consistent sets of participants can be compared both within and across age categories. In this respect these age groups represent relative rather than absolute ages. Thus where an age is given in the example references, it must be noted that the participant may have been four years older when they were recorded. Though there are relatively equal numbers of participants in each age group, the majority of the data is from the 16-25 year old group, some of whom are the mothers of the ACLA focus children. This group is crucial for studying Gurindji Kriol as the mixed language probably began to stabilise in the 1980s when they were children. In this respect, they are likely to be the agents of this stabilisation.

Figure 3 Age and number of participants

AGE	6-15YR	16-25YR	26+YR
GROUP	B	C	D
NO. OF PARTICIPANTS	22	16	20

1.6.2 Data and methodology

The data for this thesis comes from a number of sources:

Gurindji:

- (i) Unpublished Gurindji grammar (McConvell, 1996)
- (ii) A set of Gurindji stories and descriptions told by Ronnie Wavehill, Bidy Wavehill and Dandy Danbayirri collected for Diwurruwurru-jaru Aboriginal Corporation (Erika Charola 2004)
- (iii) My own Gurindji data collected using resources described below in §1.6.3.1.3.

Kriol:

- (i) Munro, J. (2005). Substrate language influence in Kriol: The application of transfer constraints to language contact in northern Australia. Unpublished PhD, University of New England, Armidale.
- (ii) Sandefur, J. (1979). An Australian creole in the Northern Territory: A description of Ngukurr-Bamyili dialects (Part 1). Darwin: SIL.
- (iii) Hudson, Joyce. (1983). Grammatical and semantic aspects of Fitzroy Valley Kriol. Darwin: SIL.
- (iv) Diwurruwurru-jaru Aboriginal Corporation texts elicited by Greg Dickson and Lauren Campbell (2007).
- (vi) My own Kriol data collected using resources described below in §1.6.3.1.3.

Gurindji-Kriol code-switching:

- (i) The *Killer* data was recorded and transcribed by Patrick McConvell in 1975, and is the subject of two papers (McConvell, 1985a; 1988a). This transcript is described in more detail in §4. This data is used in §4 and §5.
- (ii) Children's Gurindji data was collected by Patrick McConvell in the mid 1980s. The data is described in §5 and is from the subsequent publication (Dalton et al., 1995).

Gurindji Kriol:

- (i) The Gurindji Kriol data consists of 60 hours of peer and child-directed conversational data, and 20 hours of narrative and peer elicited data. Approximately 85% of these recordings have been transcribed and these constitute the Gurindji Kriol corpus. I discuss this data below.

1.6.3 The Gurindji Kriol data

The Gurindji Kriol data is derived from three sources: conversation (peer-directed and child-directed) §1.6.3.1.1, picture-prompt narrative §1.6.3.1.2 and peer elicitation §1.6.3.1.3. Many of the techniques normally used for language documentation such as sentence, paradigm and narrative elicitation were not possible for Gurindji Kriol for a number of reasons. First, as will be discussed in §2.2.5, the language has a low sociolinguistic status compared with one of its source languages, Gurindji, and indeed is generally called Gurindji. Gurindji Kriol's low status coupled with this naming convention creates unique problems for elicitation. To begin with, it was difficult to ask speakers to translate sentences in a particular language. Instead, instructions about language use in the elicitation tasks were generally framed by "how" statements - "how you speak language with your friends", "how you speak language at home etc". However the low sociolinguistic status of Gurindji Kriol also meant that many speakers were anxious about their performance, and often attempted to produce traditional Gurindji, or

they referred me to older Gurindji speakers. Schmidt (1985b, p. 7) encountered similar problems in eliciting the youth version of Dyirbal, an Australian language spoken in north Queensland, and O'Shannessy (2006, p. 16-17) had similar difficulties researching Light Warlpiri due to issues with naming conventions. Another problem with the more traditional language description techniques is the level of variation which is present in Gurindji Kriol. Part of a description of Gurindji Kriol involves mapping emergent patterns, and the factors which contribute to these patterns. This type of documentation requires large amounts of data from large numbers of speakers of varying ages within varying communication contexts.

Though data collection was difficult to begin with, the combination of an excellent Gurindji research assistant - Samantha Smiler Nangala-Nanaku (see Acknowledgements) - time spent getting to know people, and different elicitation techniques meant that Gurindji Kriol speakers gradually became quite comfortable with most of this work. All of the conversation data and some narrative data was recorded using both a video camera (with a shotgun microphone) and a minidisc (MD) recorder (with a lapel microphone). Although better sound recording devices are both recommended and available, the MD recorder was more portable. The main speaker wore the MD recorder in a bumbag which allowed her to walk around with other participants. Two recording devices were used to avoid data loss when one device occasionally failed. Also no single device adequately fulfilled all purposes. For example, I transcribed the recordings using the sound from the MD recorder because the quality of sound was better from being closer to the interaction. Nonetheless the video camera was essential for capturing the conversational context, and I referred to this recording when an utterance was unclear or another speaker was difficult to identify. Generally a Gurindji research assistant operated the video camera, and I used the minidisc recorder. I was present during most recordings, and only left when it was clear that my presence was making a new participant nervous. The peer elicitation data was recorded only using a MD recorder because the context was provided by the elicitation materials, and recordings generally only involved one speaker.

Video recordings were digitised using *Final Cut Pro 5.1.2*, and sound with *Sound Studio 2.2.4*. Both compressed and uncompressed video files exist, and all sound files exist as uncompressed 16bit 44Ghz .wav files. All digitisation took place in the field. Better methods exist for digitising MD sound; however I could not practically transport the sort of equipment required to the field, and I needed to do most of the transcription in the field. The sound files were transcribed using CLAN which allowed me to link the transcription with the audio file utterance by utterance. Thus, in most cases, all the transcribed clauses can be checked immediately without hunting through the sound file for the right location. Video, audio and transcription files have been archived with the ACLA project on the APAC (Australian Partnership for Advanced Computing) storage facility in Canberra, and can be accessed online with permission. Subsets of data for studying the ergative, locative, allative and dative marking were created using *Excel*, and statistical analyses of this data were performed using a statistics software package called *R*. Descriptions of these subsets are given in the relevant chapters.

Finally it must be noted that though data was collected using a range of elicitation modes and tools, no one study in this thesis looks at the constructions elicited from any one mode or item such as a book. Where subsets of data have been created to examine particular constructions, data from conversations, narratives and more formal elicitation are included altogether. However they are coded for "genre": conversation, narrative or formal elicitation, to control for the level of interactivity and formality. These types of elicitation are described in the following sections.

1.6.3.1 The Gurindji Kriol corpus

1.6.3.1.1 Conversation data

Most of the conversation data comes from peer and inter-generational interactions. These conversations were generally recorded on fishing trips, in the backs of cars and at culturally significant sites. Some of the conversation data for this PhD project was also collected as a part of the ACLA project. This data is adult-child interactions, either in play contexts with props such as toys, or in more natural settings such as swimming

holes. Swimming, fishing, historical site visits or informal story-telling activities provided the richest data. The adult-child data was used sparingly, as it was not always clear whether a structure was a child-directed modification or the product of normal variation.

1.6.3.1.2 Picture-prompt narrative data

A number of picture-prompt books were used to elicit narrative data. Data from the picture-prompt books tended to produce more 'monolingual' Gurindji Kriol than conversation, i.e. Gurindji Kriol where speakers did not code-switch into Gurindji, Kriol or English. Except where they occurred in conversation, freely told narratives were virtually impossible to record, for socio-linguistic reasons given in §1.6.

The picture-prompt books include the Monster book series created by Carmel O'Shannessy (2006, Appendix G) for her own work on Light Warlpiri. This series consists of 7 books: "The monster story", "The hunting story", "The guitar story", "The sick woman story", "The horse and cow story", "The crocodile story", and "The bicycle story". I also used "The bird story" (Egan, 1986), "Frog, where are you?" (Mayer, 1994 (1969)), and a set of "Whose" books (Rowe, 2004). All of these books, except the "Whose" series, contain no words and only pictures to avoid stilted translations or literacy concerns. Nonetheless younger speakers who had been to school were more comfortable with these books than older speakers who tended to skip backwards and forwards between pages and generally did not associate pictures in a clear linear fashion. Stories based on these books were often told to children as a 'warm-up', and then were used alone. Samantha Smiler is shown below telling a story to her son using the Monster story.

Figure 4 Samantha Smiler Nangala-Nanaku using a picture-prompt book



The series of picture books created by O'Shannessy contains culturally specific and modern themes for the Warlpiri; however they also resonate well with Gurindji people. Most of the stories are about hunting, monsters, collecting bush medicine, and usually involve extended families and minor disasters. Though most of the books are created to elicit comparable narratives between speakers, languages and age groups, some target specific grammatical constructions. For example, "The hunting story" is designed to study animacy and optional ergativity, and involves objects of differing animacy such as bush nuts, snakes and lightning inflicting harm on humans. The correlation between animacy and ergative marking is discussed in §9.5.2. Other books were also useful for studying specific structures. "Frog, where are you" was particularly good for eliciting goal constructions (§8), and the "Whose" series was useful for studying in/alienable possessive constructions (§6). The "Whose" series contains short repetitive English sentences, e.g. "Whose nose is that". However this prompt did not affect the speaker's language choice. These books were only used with children, and the adult readers invariably used Gurindji Kriol with the children rather than the prescribed English sentences.

1.6.3.1.3 Peer clause elicitation

Whilst the data from conversation and narrative provides a lot of material for analysis, nominal elision in Gurindji Kriol is common and is problematic for a study of case morphology. Conversation and narrative data alone do not provide sufficient numbers of nominals to map the parameters of variation within Gurindji Kriol, and to conduct statistical tests of significance. Therefore I used peer elicitation tasks to supplement the data set. A number of tasks were created that targeted particular case markers and constructions and 'forced' the use of a nominal. Eliciting single clauses within the linguist-speaker paradigm was problematic, for reasons discussed above. Instead the elicitation tasks were created as a series of games which were designed to allow speakers to address the target utterance to another member of their peer group. Some of the games, such as the card games, were based on games that are a part of everyday life for the participants, or are played at school.

Though the peer elicitation tasks produced more comparable data than conversation or narrative, these tasks were not conducted as experiments and indeed experimental conditions were not adhered to. For example, the order of presentation of elicitation materials was not randomized or counter-balanced, and some speakers had seen the materials before from observing previous recording sessions. Though these elicitation tasks were not a test in themselves, the data from them was vital in augmenting the conversation and narrative data set.

1.6.3.1.3.1 Picture-match games

The largest proportion of elicited data comes from the nominal picture-match games. These games were designed to elicit nominals with ergative, dative, locative and allative case markers in a variety of constructions including transitive, ditransitive and semi-transitive clauses, locative adjuncts, and goal constructions. I created 13 boards, each with 8 pictures which were very similar. Therefore each speaker produced 104 clauses using this tool. Two participants played this game. One had a board with the pictures facing away from the other participant who listened to the sentences. The passive

participant had a second set of free cards in front of her. The speaker asked for a card, and the passive participant selected the matching card and gave it to her. The speaker stuck the free card over the matching picture. The similarity of pictures required the speaker to describe the pictures very specifically. Mostly the pictures only differed by the target nominal. For example, two pictures may have been identical bar the agent. Thus the speaker was required to say the agent to differentiate the cards for the hearer. Below is an example of Lisa Smiler Nangari and her sons playing the picture-match games with another participant.

Figure 5 Picture-match games in action



The picture-match games were created from laminated picture boards stuck to masonite by velcro, with the free cards also stuck on using velcro. The pictures for the board games were based on pictures from *Learning Ngarinyman*, a language learning CD-ROM devised for Diwurruwurru-jaru Aboriginal Corporation (Multilocus, 2005). Pictures were used with DAC permission. These pictures were also supplemented by images from

various websites containing free images. All pictures were manipulated in *Photoshop* to create minimal pairs of actions. A sample of the picture-match boards is given below:

Figure 6 Boards for playing picture-match games.



1.6.3.1.3.2 Possession card set

This set of cards was used to elicit possessive constructions and dative allomorphy. The game was played with three or four people as a game of "Fish!". Each of the cards consisted of half an animal picture, either a head or a tail. One participant asked the player beside her "Have you got the X's tail/head?". If the player had the right card, she passed it on. If not, she said "Fish!" and the speaker got a new card from a pile of spare cards. The aim of the game was to get as many pairs of heads and tails as possible. The pictures were of 12 animals both native to the area, and foreign. Speakers had little trouble with the foreign animals. They either knew the English name for the animal,

which did not affect their use of dative morphology, or they created a name for the animal based on derivational morphology (see §A1.6.3.2).

The pictures for the game came from the FELIKS program resource book (Berry & Hudson, 1997). FELIKS is a Kriol-English transitional program created by the Catholic Education Office in Western Australia, and these particular cards were originally designed to help Kriol-speaking children learn the English possessive 's. A sample of pictures is given below.

Figure 7 Possession cards for playing 'Fish!'



1.6.3.1.3.3 Ergative bingo

Ergative bingo was designed to elicit full agent nominals. The bingo cards consist of a series of pictures where the agents differ only in terms of gender. Speakers were therefore required to say the agent in order to differentiate the pictures. This game operated according to the usual rules of bingo. A speaker was given the pile of shuffled cards. Three to four other participants had one of five bingo sheets in front of them. The bingo sheets contained 12 randomly selected pictures from a possible 32. Participants crossed the pictures out as they heard them said. The first person to cross off all pictures called out "Bingo!". Participants took it in turns to be the 'caller'. Below is an example of

Samantha and Lisa Smiler and Carmelina Stephens playing ergative bingo, with Lisa acting as the 'caller'.

Figure 8 Ergative bingo



The pictures for ergative bingo are based on Jenny Green's illustrations from the Central Australian Picture Dictionary project (e.g. Green, 2003). Carmel O'Shannessy (2003) edited the pictures to change the genders of the agent.

The following chapter presents a sociolinguistic picture of Kalkaringi and the language ecology where Gurindji Kriol is found, and socio-historical information relevant to the formation of Gurindji Kriol. More description of Gurindji Kriol can be found in §A1, which provides a structural sketch of this mixed language.

2. THE SOCIO-POLITICAL ORIGINS AND SETTING OF GURINDJI KRIOL

2.1 Situating Gurindji Kriol¹²

In §1.5.1, I suggested that Gurindji Kriol is best described as a 'conventionalised' mixed language because it emerged in a highly bilingual setting and continues to be spoken alongside its source languages. Explicating this point further, I begin in this chapter with a snapshot of speech which typifies the conversational style used between 40 year old and 20 year old women from Kalkaringi. This discourse is characterised by the use of a number of languages including Gurindji, Kriol and Gurindji Kriol, and code-switching between these languages. The threads of language are finely interwoven within this seeming tangle of language contact and mixing. Barely an utterance exists where Gurindji and Kriol are not mixed, whether by code-switching, or within the mixed language. This is the setting where Gurindji Kriol found its origins and now continues to be spoken. This chapter will describe the language environment where Gurindji Kriol is situated (§2.2) and the socio-political and linguistic factors which preceded the formation

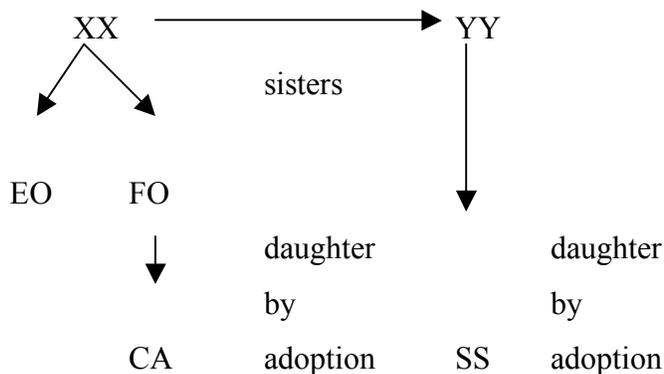
¹² Some of this section and the following section will appear in:

Meakins, F. (forthcoming). Unravelling languages: Multilingualism and language contact in Kalkaringi. In J. Simpson & G. Wigglesworth (Eds.), *Children's language and multilingualism: Indigenous language use at home and school*. New York: Continuum.

of the mixed language (§2.3). I will suggest that these factors drove this level of contact and mixing (§2.5), and that the history and status of Gurindji Kriol is comparable to that of other mixed languages (§2.6).

The extended example below consists of two excerpts from a conversation which was recorded in the nearby Ngarinyman community of Yarralin (see map) on an overnight trip from Kalkaringi in August 2005. In the first excerpt the women talk about where another group of people have gone fishing. The second excerpt is a discussion about a type of ashes which are used to flavour chewing tobacco, and where to find them around Yarralin. The speakers are SS who is 18 years old, CA (19yr), EO (46yr) and FO (41yr). The women have close relationships with each other. FO and EO are sisters. CA is the adopted daughter of FO, and she also calls EO "mother". SS calls both FO and EO "sister" because her adopted mother was the sister of the mother of EO and FO. Gurindji elements are italicised and Kriol elements are in plain font.

Figure 9 The relationship between speakers in (22).



(22) (FM048.A: Conversation)

(Fishing conversation excerpt)

- (a) SS: CH-mob weya dei bin gon bij-in-bat?
 NAME-GROUP where 3PL.S NF go fish-CONT-CONT
 "CH and that lot - where did they go fishing?"

- (b) CA: boring-*nginyi* dei bin tok dei gon bij-in-bat.
boring-ABL 3PL.S NF talk 3PL.S go fish-CONT-CONT
"They said they were going fishing because they were bored."
- (c) EO: dei neba tok *kuya* wi gon NAME-pleis-*jirri*.
3PL.S NEG talk thus 1PL.S go PLACE.NAME-PLACE-ALL
"They didn't say 'We're going to NAME', like that."
- (d) CA: deya maiti xxx *yawu* yet.
there maybe xxx fish yet
"Maybe there's (?no) fish yet"
- (e) EO: *marntaj* wi kan *liwart* hiya wi *ngurra* *nyawa-ngka-rni*.
ok 1PL.S can wait here 1PL.S camp this-LOC-ONLY
"That's OK, we can wait here, we'll camp right here."
- (f) FO: *wanyjika-warla* *nyila* *ngu-lu* *ya-ni*?
where-FOC that CAT-3PL.S go-PST.PER
"Where did that lot go?"
- (g) CA: dei neba tok *ngayiny* dei bin jas tok
3PL.S NEG talk me.DAT 3PL.S NF just talk

"ai-m gon bij-in".
1SG.N-NF go fish-CONT
"They didn't tell me, they just said 'I'm going fishing!'."
- (h) FO: wal *yangki* *pa-rra* *nganayirla*?
well ask hit-IMP whats.it.name
"Well ask whats-his-name."

....

(Ashes conversation excerpt)

- (i) EO: maiti jeya na *hawuj-ja*.
maybe there DIS house-LOC
"Maybe it's there in the house."
- (j) CA: *milk-tin-ta* rait ful *kawurn-ma*,
milk.tin-LOC right full ashes-DIS

kuya-ny na wait-wan-*walija*.
thus-NOM now white-NOM-PAUC
"There's loads of ashes in the milk tin, lots of that white stuff now."

- (k) EO: *wanyjika-warla* dei ged-im-bat *kawurn?*
 where-FOC 3PL.S get-TRN-CONT ashes
 "Where are they getting ashes from?"
- (l) CA: *hiya la Lingara Road-ta jamweya dei bin ged-im-bat.*
 here PREP Lingara Road-LOC somewhere 3PL.S NF get-TRN-CONT
 "Somewhere here on the Lingara road, they've been getting it."

 dei bin ged-im-bat SO-mob-tu-ma.
 3PL.S NF get-TRN-CONT NAME-GROUP-ERG-DIS
 "That's where Kawurla and that lot got it."
- (n) EO: *ngu-lu ma-nku na pirinyji-ngka na ib dei kom.*
 CAT-3PL.S get-FUT DIS afternoon-LOC DIS if 3PL.S come
 "They can get it in the afternoon, if they come back in time."

In this conversation, the older women, EO and FO speak Gurindji and Gurindji Kriol, and switch between these languages. For example, in (f) and (h) FO speaks only Gurindji when asking where a group of people have gone fishing. EO uses the Gurindji Kriol in (c) to discuss the same topic, and again in (e) suggesting that they wait for the group and camp over-night. Their daughter, CA speaks Gurindji Kriol predominantly, for example in (j) when she describes where to find some ashes. However she also alternates between Kriol and Gurindji Kriol. The speech of SS is very similar to CA. An example of her use of a sentence with Kriol-only lexemes is in (a)¹³. Both the older and younger women also switch between languages in various ways. Language switching can occur between speakers of different generations. For example in (f) FO asks CA where some people have gone in Gurindji. CA replies in Gurindji Kriol in (g) and FO follows with a command in Gurindji. Switching also occurs within a sentence. In (n) EO tells CA when some other people can collect ashes. She begins in Gurindji and then switches to Kriol halfway through. Another pattern of switching is the insertion of a single word or suffix into a sentence of a different language. For instance in (h) FO uses a Kriol discourse marker *wal* (well) in an otherwise Gurindji sentence. CA also uses this mixing strategy in (b) and (l), however these sentences represent a more grammaticalised form of mixing,

¹³ As was discussed in §1.5.2, because no nominals are present it is difficult to classify this utterance as either Kriol or Gurindji Kriol. The VP and regular pronouns are derived from Kriol in Gurindji Kriol, making nominal-less clauses virtually impossible to classify.

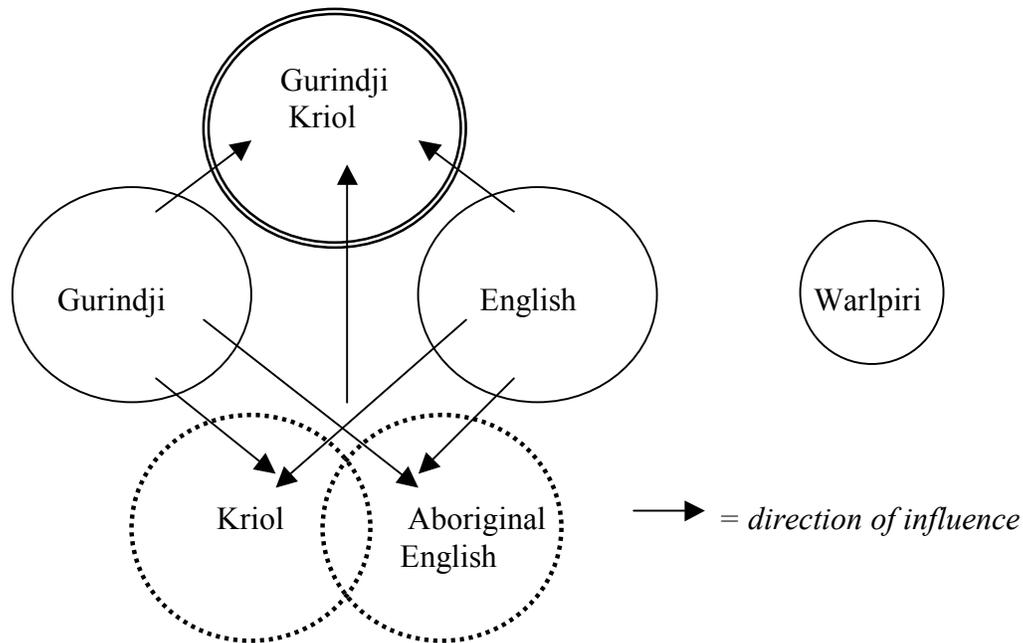
Gurindji Kriol. The differences between Gurindji Kriol and code-switching between Gurindji and Kriol was discussed in §1.5.2 and is discussed further in §2.2.6.

The different use of language by all of these speakers illustrates the complexity of the language situation at Kalkaringi. Although the traditional language of Kalkaringi and the surrounding area is Gurindji, the language situation is far from monolingual. As the excerpt of conversation in (22) demonstrates, the range of languages spoken at Kalkaringi along with different linguistic practices make the language environment a complex of languages, language contact and code-switching. The following section will set Gurindji Kriol within this context by discussing the languages spoken at Kalkaringi and their functional domains (§2.2.1-§2.2.5), the mixing strategies used (§2.2.6).

2.2 The language situation of Kalkaringi

The main languages spoken in Kalkaringi are Gurindji and Gurindji Kriol. Kriol, Aboriginal English and Standard Australian English are also found, along with a neighbouring language, Warlpiri, though their use is more marginal. A lot of cross-over exists in the phonology, structure and lexicon of these languages. Gurindji Kriol is the most radical amalgam of languages, combining equal elements from the grammar and vocabulary of Gurindji and Kriol. The Aboriginal English spoken at Kalkaringi is influenced by the Gurindji sound inventory and some grammar. Finally the variety of Kriol spoken at Kalkaringi also contains grammatical structures which have developed under the influence of Gurindji. Sometimes it is quite difficult to distinguish Kriol and Aboriginal English. They exist on either end of a continuum of contact Englishes and there is a lot of cross-over in the structure of these languages. The effect of all of these languages on each other is demonstrated in Figure 10 below.

Figure 10 Language Environment of Kalkaringi/Daguragu



In the following section, I will briefly describe the social domain where each of these languages is found. Their function within the context of language mixing will be examined afterwards. The grammatical structure of these languages is described in §A1.

2.2.1 Gurindji

Gurindji is a member of the Ngumpin-Yapa subgroup of the Pama-Nyungan language family, which includes Bilinarra, Ngarinyman, Jaru and Warlpiri (see §A1.2.1). Gurindji is an endangered language, with only 60 full speakers remaining in 2001 (Lee & Dickson, 2002 reported in McConvell 1988, p. 99-100), though a lot of its vocabulary and grammar is preserved in the mixed language, Gurindji Kriol.

It is common to hear some monolingual Gurindji utterances, but in a conversational sequence Gurindji is rarely found without some mixing with Kriol. Even then, it is only spoken monolingually by people over the age of 35. Examples of monolingual Gurindji

were shown in (22)(f) and (h). (23) is another example of monolingual Gurindji in a conversation between 40 yr old women. The women are at an important historical site called Jinparrak (Old Wavehill Station, see §2.3.2). EO is directing SO to tell a story about the place to the children while the other women sit further away and make lunch.

- (23) *SO yurrk ma-nyja nyawa-ngka¹⁴ ngu-rnalu karri-nyana.*
 NAME tell.story talk-IMP this-LOC CAT-1PL.EX be-PRS.IMP
 "SO, you tell a story and the rest of us will stay here."
 (FM057.C: EO46yr: Conversation)

Code-switching, even amongst older people was observed by McConvell (1985a; 1988b) in the mid-1970s, and code-switching between traditional Australian languages is likely to have been a common social practice before colonisation (see §2.3.1). Gurindji is spoken among older people, however when they speak to younger people, particularly children, they tend to use more Kriol. This practice of using Kriol with children is a common phenomena reported across northern Australia. It forms part of a belief that Kriol is an 'easier' language than traditional Australian languages and therefore more appropriate for children. Most people believe that the children will learn their traditional language as they get older. This model of language acquisition has not been borne out with time, however. In the case of Kalkaringi, Gurindji people under the age of 35 years do not speak Gurindji monolingually with any degree of proficiency, as was said in §1.5.1. Younger speakers have little control of the Gurindji inflecting verb and bound pronoun systems (§A1.2.1), though their level of passive knowledge seems to be high. However they use the Gurindji nominal system including inflectional and derivational morphology within the mixed language.

Gurindji is mostly used as a home language, and it has little place in official institutions in Kalkaringi. Small Gurindji language programs have operated in the school at various times. For example from 1979-84, SIL linguists Helen and Norman McNair ran Gurindji language programs for the school children. After a long gap, Erika Charola also

¹⁴ Interestingly EO does not use the older Gurindji inflected demonstrative *murlungka* to express "here", rather she uses the modern form *nyawangka* (see §A1.9). It is likely that this newer and more generalised form is an earlier change in Gurindji, which preceded the formation of the mixed language.

facilitated these programs with Gurindji speakers when she was employed as a community linguist by Diwurruwurru-jaru Aboriginal Corporation between 1998-2000. Currently no Gurindji is taught in the school, with token Gurindji mottos the only acknowledgement of the local language. Gurindji has a stronger presence in church services due to the McNairs. Many hymns have been translated into Gurindji, and are sung in both Gurindji and English. Other parts of the service such as the Eucharist are also said in Gurindji if a Gurindji lay assistant performs this rite.

2.2.2 Warlpiri

The only other traditional language of the Victoria River District and North Tanami Desert area which is spoken in Kalkaringi is Warlpiri. Warlpiri is the only language in this region which remains strong. It is spoken at Lajamanu also in conjunction with Kriol, Aboriginal English and a mixed language, Light Warlpiri (O'Shannessy, 2005). I am not concerned with Warlpiri in this study, however it is worth noting that a number of participants in this study have strong Warlpiri connections. The younger speakers do not speak Warlpiri proficiently; nonetheless they mark their Warlpiri identity through the use of some commonly borrowed nouns. For example in (24) the 23 year old speaker inserts the Warlpiri word for tree, *watiya*, into a Gurindji Kriol sentence.

(24) *nyila-nginyi-ma* i=m baldan na *nyawa-ma*
 that-ABL-DIS 3SG=NF fall.over DIS this-DIS

nyawa-ngka ***watiya-ngka***.
 this-LOC **tree-LOC**

"After that, this one fell over the **tree** here." (FM009.A: RR23yr: Bird story)

Other Warlpiri words have come into common usage among younger Gurindji people. For example, the Warlpiri numeral "one", *jinta*, has gained some currency. It is now used more often than the equivalent Gurindji word, *jintaku*¹⁵. A shorter-lived Warlpiri fashion

¹⁵ In fact the counting numerals of young adults and children contain a mix of languages: *jinta* (one - Warlpiri), *kujarra* (two - Gurindji), *jirri* (three - Kriol), *fobala* (four -NOM - Kriol) etc ... *jarrwa* (many - Gurindji). The traditional Gurindji system has only four numbers hence the large borrowing of Kriol numerals above 4. Gurindji also has another counting system from 1-51, but it is largely a rhyme and the numbers are not used individually.

among 5-10 year olds was the Warlpiri word for "water", *ngapa*. This group used this word during my March field trip in 2005. They were aware of the word's language origin, and have since reverted back to the Gurindji word *ngawa*.

2.2.3 English

Standard Australian English and *Aboriginal English* are not dominant languages in Kalkaringi. English is generally only heard at the school, which is an English-only school, at the clinic, council office and in other places where interactions with *kartiya* (non-indigenous people) are common. English is rarely used in the home, though younger people do use English phrases from television or school teachers, usually to comic effect. For example in (25) below, SS and SE are playing with SS's 2 year old son, pretending to be doctors. SS (18 years old) begins speaking in Gurindji Kriol, and switches to Aboriginal English in (b). SE (14 years old) follows with a list of instructions for the patient which she says using American-accented English. In this sequence they are laughing as they imitate their previous experiences at the local clinic and from watching American medical dramas.

- (25) (a) SS: *janga* LD *janga nyuntu janga*.
 sick NAME sick 2SG sick
 "You're sick LD, sick, you're sick."
- (b) SS: go back home you very hot LD.
- (c) SE: you need to go home relax have some cup of tea and never yell at
 your children you got it? (FM021.B: SE12yr, SS18yr: Conversation)

2.2.4 Kriol

The second contact variety of English, which is spoken at Kalkaringi, is Kriol. Kriol which is an English-lexifier creole language, and the first language of approximately 20 000 Aboriginal people (Sandefur & Harris, 1986, p. 179). Kriol is spoken in different varieties across the Top End of Australia, from Ngukurr in Arnhem Land in the east to Broome on the west coast of Western Australia, and south to Tennant Creek. It mixes much of the grammar and lexicon of English, with the phonology and semantics of a

number of traditional languages of the Ngukurr area, but also with some Gurindji features. Where it is spoken, it has either supplanted the traditional language or is in the process of doing so (Munro, 2000: 246). More information about the origin and structure of Kriol is given in §A1.2.2.

Kriol is spoken by younger Gurindji people but again rarely without some mixing with Gurindji, as was introduced in §1.5.1. In (22)(a) SS uses a monolingual Kriol utterance to ask where a group of people have gone. (26) is another example of a Kriol-only sentence from a conversation between two 20 yr old Gurindji women travelling in a university car near Kalkaringi.

- (26) yeah ai garram jumok bat wi not alaud
 yes 1SG.S have cigarette but 1PL.S NEG allowed
- tu jumok la motika.
 to smoke PREP car
 "Yeah I have a cigarette but we're not allowed to smoke in the car
 (because it's a university car)." (FM052.A: RR23yr: Conversation)

Though Kriol is rarely spoken monolingually, it is used with other Aboriginal people in the nearest service centre, Katherine, or spoken to Kriol-speaking visitors in Kalkaringi. Gurindji people usually have little trouble replacing Gurindji words and suffixes with equivalent Kriol words.

2.2.5 Gurindji Kriol

The main contact language spoken in Kalkaringi is the mixed language, Gurindji Kriol. Gurindji Kriol is now the dominant language of Kalkaringi, though it has no official status in the various indigenous and non-indigenous institutions in Kalkaringi. It is spoken by everyone under the age of 35. CA uses Gurindji Kriol in (22)(j) when she is describing where the ashes for chewing tobacco are kept. Younger speakers often switch between Gurindji Kriol and Kriol, and older speakers switch between this language and

Gurindji. This type of switching is discussed below in §2.2.6, and more information on the structure of Gurindji Kriol is given in the next chapter.

Gurindji Kriol has a low social prestige status in Kalkaringi compared with Gurindji. Older people generally describe it in terms of the loss of Gurindji, rather than the creation of a new language, or the maintenance of Gurindji in a mixed form. Older people complain that the younger generations do not speak Gurindji correctly. Younger people who are the main speakers are quite shy about discussing their speech style, aware that they do not speak Gurindji in a traditional manner. However this language has a lot of covert prestige among its speakers, symbolising the younger more modern Gurindji person. This mixed language also has no name. The term "Gurindji Kriol" was created during a Batchelor workshop facilitated by Erika Charola (2002), and was later agreed upon by the young Gurindji women involved in this project. However this term has no currency in the community, and nobody would use it to denote the mixed language. In fact this language is usually called "Gurindji". If a distinction between Gurindji and Gurindji Kriol is required, Gurindji is usually referred to as "hard Gurindji", "rough Gurindji" or "proper Gurindji", and Gurindji Kriol as "Gurindji". The term "Gurindji", it seems, is a relative term used to signify the main language used by the community rather than a particular language form. In some respects the use of "Gurindji" to refer to Gurindji Kriol also accords it some status, and marks a desire to continue the tradition of the Gurindji people. These naming conventions can make the elicitation of Gurindji Kriol quite difficult. See §1.6.2 for a discussion of this issue and its implications for methodology.

2.2.6 Language mixing in Kalkaringi

The main point of the previous section was to give a general idea of the social domain of each of the languages spoken at Kalkaringi. A common theme which has emerged is the rarity of monolingualism both on the utterance level and certainly the discourse level. Language mixing in the form of *code-switching* is the most common language practice. Code-switching occurs between speakers where one person speaks one language and the

other person replies in another language. It can also occur within one speaker's sentence. Code-switching by one speaker occurs as *insertional* and *alternational* code-switching (Muysken, 2000), and these patterns are discussed in detail in §5.2 onwards. Of particular interest is code-switching between Gurindji, Kriol and Gurindji Kriol.

First, speakers do not necessarily speak to each other using the same language. Sometimes one speaker may accommodate for another speaker. If accommodation occurs, it is usually an older speaker accommodating to a younger speaker's style. A younger speaker may accommodate to an older speaker in particular situations, for example when she is attempting to ask for money or to elicit a favour that may be stretching the bounds of kinship obligations. But it is also quite common for speakers to maintain their own speech styles in the course of a conversation. An example of an older person speaking Gurindji and a younger person replying in Gurindji Kriol was provided in the first example (22)(f-h). The following exchange is another example which comes from a conversation between a 54 year old woman (CR) and her 19 year old daughter (AR) at Pawuly, a popular fishing spot. They are discussing how to cast a fishing line. In this case, one speaker is associated with one language, and code-switching occurs between speakers. AR begins in Kriol¹⁶, and CR replies in Gurindji.

(27) AR: *juk*¹⁷-*im* *yu* *rait*.
 throw-TRN 2SG right
 "You're right to throw it now."

CR: *kula yikili ngu-rna yuwa-rra*.
 NEG far CAT-1SG.S put-IMP
 "I won't throw it too far." (FM035.B: AR19yr, CR54yr: Conversation)

Very rarely, the same language switch may occur between speakers of the same generation. For example, in (28) RS and CA are recounting an event that occurred during

¹⁶ This utterance may also be classified as Gurindji Kriol, as there is little to distinguish it from Kriol in this short utterance, i.e. no nominals and accompanying morphology. See §1.5.2 for a discussion of this issue.

¹⁷ In fact this word should be transcribed *jak-im*, however there is a related Gurindji word *jak* which means to fall with or without an agent. There is some cross-over in verb semantics which is a bit confusing, and I suspect that younger speakers are not clear in their use of either form. Nonetheless I write *jukim* for the Kriol form, and *jak* for the Gurindji form. They are distinguished formally by the presence of the transitive suffix. My analysis of these verbs does not impinge on any other analysis in this thesis.

a sports carnival when they were children. RS uses Gurindji Kriol, and CA replies in Gurindji.

(28) (FM060.A: RS20yr, CA19yr: Conversation)

FRS: det person yu rimemba wen wi bin hab-im
the person 2SG remember when 1PL.S NF have-TRN

ngumpin jintaku i=m gon kaa-rni-rra.
ab.man one 3SG.S go east-up-ALL

"The person, you remember, when we had (the carnival), that guy went east."

FCA: ah yeah. *ngu ya-ni warl wayi?*
ah yeah. CAT go-PST ran.away TAG.Q
"Ah yeah, he ran away, didn't he?"

One form of language mixing which occurs within one speaker's utterance is *insertional* code-switching. Following Muysken (2000, p. 4), insertional code-switching occurs when fragments of one language are embedded within another's grammar. A tighter definition of insertional code-switching and more detail about the code-switching origins of Gurindji Kriol is provided in §4 and §5. Code-switching between Gurindji and Kriol is still common. For example 35+ year old speakers often use Gurindji as their base or matrix language. In (29) a 39 year old speaker uses the Kriol/English noun *cup* within a Gurindji sentence. The matrix language in this example is identified by the use of verbal inflectional morphology¹⁸. The Gurindji inflecting verb and pronoun complex is used where it is never found in Gurindji Kriol.

(29) *ngu-rna yuwa-ni kap-kula.*
CAT-2SG.S put-PST.PER **cup**-LOC
"I put it in the **cup**." (FM057.C: SO39yr: Conversation)

Alternational code-switching is also commonly used to mix Gurindji, Kriol and Gurindji Kriol. In alternational code-switching a language is not structurally nested within another language to the same extent as insertional code-switching. In most cases, an utterance begins with a clause in one language and finishes in another (Muysken, 2000). Again the

¹⁸ see §4.3.1 for a discussion on determining the matrix language.

typology and historical relevance of this type of code-switching will be discussed in more detail in §5.2.3. In example (30), EO tells SO to tell a story to her grandson. She begins in Gurindji (all Gurindji lexicon, Gurindji inflecting verb and bound pronoun complex) and later switching to Gurindji Kriol (Kriol verbal inflection, Gurindji verb). Similarly in (31) the same speaker begins in Gurindji Kriol and switches to Gurindji in the main clause. In (32) LE and her sisters are fishing at Kalkarriny. A water goanna appears and LE describes what it is doing. She begins in Gurindji Kriol and then switches halfway through to Aboriginal English. RS performs the same switch in (33), beginning with a Gurindji Kriol clause then adding an English prepositional phrase, and finally switching back to Gurindji or Gurindji Kriol (*kanyjurra-k* "down-ALL" is not a distinguishing feature of either language).

- (30) SO *jarrakap* *ma-nyja-rla* *nyila-wu* *karu-wu* NA-wu /
 NAME talk talk-IMP-3IO that-DAT child-DAT NAME-DAT /

yu yurrk la im.
 you tell.story PREP 3SG.O
 "SO talk to that kid NA, you tell him a story." (FM057.C: EO46yr: Conversation)

- (31) *i=m* *tumaj* *partawarn* det *janyja* /
 3SG.S=NF because hard the ground /

ngu-lu-rla kurrij-karra pung-ana yipurrk.
 CAT-3PL.S-3DAT scratch-CONT poke-PRS.IM in.vain
 "Because the ground is too hard, they're digging for frogs in vain."
 (FM047.C: EO46yr: Conversation)

- (32) *i=m* *wirrk-karra* *i=m* *wirlk im* /
 3SG.S-NF pull-CONT 3SG.S-NF pull 3SG.O /

 that's why he bin come back this side
 "It (the water current) is dragging it (the goanna), that's why it can't swim back to this side." (FM041.C: LE18yr: Conversation)

- (33) wi gon *kanyjurra nyawa-ma* *riba-ngka ngawa-ngka*
 1PL.S go down this-DIS river-LOC water-LOC
- kol-wan-ta / down the creek / kanyjurra-k.*
 cold-NOM-LOC / down the creek / down-ALL
 "We're going down the creek through the cold water, down the creek,
 downwards." (FM060.A: RS20yr: Conversation)

This section has given an overview of the various languages spoken at Kalkaringi, their functions and the mixing strategies used. This complex mix of languages and speech styles found in Kalkaringi is due, in part, to the rapid change of Gurindji society as a result of European colonisation. A number of important historical events have also contributed to the language environment observed today. The following section will discuss the history of the Gurindji people and their linguistic practices at various points in time.

2.3 A brief socio-political and linguistic history of the Gurindji people

The post-contact history of the Gurindji people is perhaps one of the better-documented periods of Aboriginal history. A number of accounts of this time come from historians (Doolan, 1977; Hokari, 2000; 2002; Long, 1996; Mulligan, 1999; Riddett, 1997), anthropologists (Berndt, 1950; Bird-Rose, 1991; 2000; Lauridsen, 1990; McConvell, 1985b; 1998; 2002a), activists (Dodson, 2000; Hardy, 1968) and the Gurindji themselves (Daguragu-Community-Council, 2000; Donald, 1998; Frith, 1998; Kijngayarri, 1986 (1974); Rangiarri, 1997; 1998; Wavehill, 2000). Much of the interest in the Gurindji people is derived from their 9 year worker's strike protesting against the poor conditions of employment on cattle stations (1966-75), and their subsequent pastoral lease (1975) and land claim (1986). This claim was the first of its kind in Australia¹⁹. It provided impetus for the Aboriginal Land Rights (Northern Territory) Act (1976), and heralded a fresh wave of Aboriginal activism and non-indigenous interest in the plight of Aboriginal

¹⁹ In fact Aboriginal land rights first hit the headlines in 1963 when the Yirrkala people of Arnhem Land in the Northern Territory presented a bark petition to the Federal Government to stop their traditional lands being handed to French mining interests. Workers strikes similar to that of the Gurindji also occurred in the Pilbara region in Western Australia. Despite these protests, the Gurindji people's petitioning of the government had the earliest legislative impact.

people. However not all of Gurindji history tells such as positive story. Accounts of earlier and darker periods of contact such as massacre stories and virtual slave labour also exist largely as a result of information which emerged in land claim hearings, Berndt and Berndt's (1987) "End of an era" and oral history projects run by Erika Charola through the Diwurruwurru-jaru Aboriginal Corporation. The language environment has been affected by this history. This section will give a brief account of the history of the Gurindji people, and the language practices of the Gurindji. I will focus on the strike and land claim period because I believe the socio-political climate of the time in the VRD contributed to the retention of Gurindji through the mixed language where other areas were shifting to Kriol.

2.3.1 Pre-contact history

Gurindji history begins with the formation of the landscape during a period called the Dreaming. Dreaming creatures traversed the land, shaping its features in a series of journeys referred to as Dreaming tracks or lines. These creatures took many forms. They were animals, humans or natural phenomena such as rain or lightening, and were responsible for the creation of hills, rocks, waterholes and clusters of trees. A number of Dreaming tracks criss-cross Gurindji country including Ngawa (rain), Martilyi (plains kangaroo), Wampana (hare-wallaby) and Kajirrikujarra warlakukujarra (two old women and two dogs). The maintenance of these lines and their associated sites is essential for the physical and spiritual well-being of the Gurindji people. Some sites are imbued with procreative powers themselves such as Karungkarni, a hill near Kalkaringi which provides the Gurindji with their children. Other sites do not contribute directly to the health of the Gurindji, however the destruction of these places can cause mass sickness. Land and language are tightly interwoven. The Dreaming creatures sung the land into being, and the stories of the Dreaming are recounted in songs which also act to help maintain the land. These songs are passed down through family lines which are determined by the Gurindji social structure. Gurindji society is divided into two moieties: *Jalmawuny* - Heron moiety and *Warlawurruwuny* - Eaglehawk moiety. These two moieties provide the basis for land ownership and management. Any one area is owned

by people from one moiety and cared for by people from the other. These moieties are further divided into four subsections (skins) which form the basis of kinship relations, dictate behaviour between family members and designate appropriate marriage partners. This general description of the Gurindji belief system and social structure applies to many Aboriginal groups across the north-central area of Australia.

Before European contact the Gurindji were semi-nomadic, travelling mostly within their traditional land and subsisting on seasonally available animal and plant food. Contact with their neighbours was common. The Gurindji's closest neighbours were the Bilinarra and Ngarinyman to the north-west, the Jaru people to the west, the Karrangpurru to the north-east, Mudburra people to the east and the Warlpiri to the south. Warfare between the Gurindji and nearby desert people occurred, however the neighbouring groups also shared many cultural practices and would come together once a year for ceremony time. For a fuller account of Gurindji society see McConvell (1976; 1985b) and for Ngarinyman and Bilinarra people see Bird-Rose (1991; 2000).

The Gurindji characterise the time before European invasion as an unchanging but cyclical period of social and natural order, and predicability. Indeed much of the cosmology of the Gurindji people is quite old, partly demonstrated in the archaic form of Gurindji still used in the Dreaming songs. Other practices have been introduced more recently. For example, the songs and ceremony of the Mungamunga women who come from the Roper River region of Arnhem Land dates back only to the early 20th century. These two women are associated with the Kunapipi cult and they brought potent love songs and secret ceremonies to Gurindji women via Bilinarra women (Berndt, 1950; Lauridsen, 1990)²⁰. Up until recently women still received songs and ceremony from the Mungamunga through dreams. Though some of the songs discuss traditional law and sexual conduct, much of the content is about more contemporary issues.

²⁰ This cult also spread south from the Roper River region into Borroloola, the Barkley Tablelands and to Tennant Creek.

Little is known about language practices of the Gurindji before European settlement, however McConvell (1988a) suggests that the Gurindji and other Aboriginal groups have probably always been highly multilingual, with language mixing an unmarked form of communication. Indeed, as was shown in the previous section, today multilingualism, and code-switching and borrowing between traditional Australian languages, and between these languages and English-based contact varieties is quite common. It is possible that this level of mixing is associated with the severe language shift to Kriol and English seen in many parts of Australia. However code-switching between traditional languages suggests that mixing was a common practice before European contact, and these contact languages were merely added to the repertoire.

2.3.2 The European invasion

First contact with *kartiya*²¹ was a brutal period. Unlike in northern Arnhem Land where Aboriginal people had enjoyed good trading relations with the Macassans, the first Europeans in the Victoria River District (VRD) were only interested in land. The black soil plains of the VRD was attractive to white settlers who were looking for good pastoral land to set up cattle stations. The first party of European explorers was led by the Gregory brothers, Francis and Henry. In late 1855 they arrived from the north. They followed the Victoria River and its tributaries and came upon the VRD which they decided was suitable grazing land (Makin, 1999, p. 43 onwards). Bilinarra, Ngarinyman and Karrangpurru country were the first be stocked with cattle in 1883. In the process, the *kartiya* brought with them diseases that Aboriginal immune systems and traditional bush medicines could not cope with. These diseases actually briefly predated the arrival of the *kartiya* in the VRD as a wave of illness which came from already-settled areas in the north. Bird-Rose (1991, p. 75 onwards) suggests that small pox almost completely devastated the Karrangpurru before the settlers virtually finished them off in a series of massacres. Now only a handful of people from one family claim some Karrangpurru heritage. The Bilinarra and Ngarinyman fared little better, but Bird-Rose suggests that,

²¹ *Kartiya* is the Gurindji word for "white people", perhaps derived from "guardian". It also may be a Gurindji word for ghost which broadened to include "white people" due to their skin colour and aggressive behaviour towards Aboriginal people.

perhaps due to the rocky nature of their country, they were able to hide, and put up a greater resistance to the settlers. The aim of the killing sprees probably would have been complete genocide had the settlers not realised that Aboriginal people would make an excellent source of cheap labour. As a result they survived, and were put to work as stockman and kitchen hands on the cattle stations, where they also lived in fringe camps. However by this stage the numbers of Aboriginal people in the VRD had diminished significantly. For instance, when Berndt and Berndt (1948) first encountered the Bilinearra, they were working for the Australian Investment Agency surveying Aboriginal populations on cattle stations. They observed that the population was top-heavy with few children making it into adulthood. However with peace and better health care the Bilinearra now live in greater numbers mostly at Nijburru (Pigeon Hole) and also at Yarralin.

Though the Gurindji people lived further south, they did not escape the onslaught of the white pastoralists either. Ronnie Wavehill Jangala (2000) recalls similarly bloody periods where the settlers went on killing sprees. These massacres were a disproportionate response to the Gurindji stealing their cattle. However the battles were not always one sided and the Gurindji sought their own revenge for these massacres. Wavehill tells of one massacre that occurred at Warlakurla (Seale Gorge) which is west of Daguragu along the Seale River. This was a place where Mudburra, Gurindji and Ngarinyman people met up at on their travels. A group of pastoralists went to Warlakurla and shot dead everyone camped there, women and children included. Two men later stayed behind to burn their bodies, which was contrary to the traditional mortuary practices of the Gurindji who put dead bodies on high platforms to allow the deceased's spirit to pass on. The two pastoralists were ambushed by two Gurindji men, who killed and burned them in retaliation. This story is typical of the attacks and counter attacks which were common during this time. However the colonists soon decimated the Gurindji, probably because they had better firearms, and the remaining people were brought under the control of pastoralists.

Most of the Gurindji lived and worked at Jinparrak (Old Wave Hill Station), along with members of the Mudburra and Warlpiri tribes. This station was owned by the English Lord Vestey, who was the largest land holder in Australia at the time, owning a number of cattle stations across the north of Australia. The conditions of the Aboriginal people working and living on the stations were appalling, particularly given the profitability of these stations. Oral accounts from Gurindji people (Daguragu-Community-Council, 2000; Donald, 1998; Kijngayari, 1986 (1974)) and a report by Berndt and Berndt (1948) which was commissioned by the Vestey family to investigate the welfare of Aboriginal employees concur, describing the conditions as substandard. 250 people including 92 men lived in a small area. Gurindji people received no wages for their work. They worked as station hands and stockman in exchange for goods such as tobacco, salted meat, flour, sugar and tea, and occasionally clothes and blankets. Gurindji women were often forced into sexual liaisons with *kartiya* stockman. The Gurindji lived in humpies which were constructed from discarded material from the station. Fresh water had to be drawn and carried some distance from a well. As a result the general health of people was low and the infant mortality rate very high. The Gurindji commonly likened these conditions to being treated like dogs, and despite Berndt and Berndt's candid report, little was changed.

Discontent ran high amongst the Aboriginal workers. Though many seemed resigned to their predicament, one Gurindji stockman, Sandy Moray Tipujurn, started agitating amongst the Gurindji. He had spent time travelling to other cattle stations in Queensland and Western Australia and had seen better examples of race relations and employment conditions. Tipujurn had big ideas which went beyond an industrial dispute. He wanted the Gurindji to retrieve their land and run their own cattle station. The opportunity to begin this process arose when another Gurindji stockman Vincent Lingiari was thrown from his horse and sent to Darwin to be treated. There he met Aboriginal unionists, Dexter Daniels and Bobby Tudawali, who said that the NAWU (North Australian Workers Union) would support the Gurindji if they decided strike. When Lingiari returned to Wave Hill station, he informed the station manager, Tom Fisher, of their intention to strike. Then on the 23 August 1966, Lingiari gathered his people and they

walked 16 kilometers to Jurnani (Gordy Creek) and later to Daguragu which is a Ngamanpurru (Conkerberry) Dreaming place. This event is now known as the Gurindji Walk-off. Various attempts over the years to convince the Gurindji to return to the station failed. Eventually they were offered wages equal to those of white stockmen. However the Gurindji stood their ground. Although their protest had taken the form of a workers strike, they had not stopped talking about reclaiming their traditional lands which had been taken over by the Vestey's. The NAWU, and in particular a union activist from Sydney called Frank Hardy, continued to support the Gurindji. He helped them petition the federal government, and raised money to fly Vincent Lingiari and another Gurindji stockman, Mick Rangiari to Sydney on a couple of occasions to talk to union and university crowds about station conditions and land issues. In 1975, after 9 years of persistent campaigning and a change to a more liberal federal government, the then Australian Prime Minister Gough Whitlam flew to Daguragu to grant the Gurindji a lease for 3236 km² of land around Daguragu. This event has been immortalised by a photo of Gough Whitlam pouring soil into Vincent Lingiari's hands who was, by this stage, a much older man, and blind. Twenty years later, in 1986, they were granted the security of inalienable freehold title under the Northern Territory Land Rights Act²².

²² For a more detailed personal account of this sequence of events, see Frank Hardy's *The Unlucky Australians* (1968). Other oral accounts from Gurindji people and interesting interpretations of this period can be found in two articles by Minoru Hokari (2000; 2002).

Figure 11 Prime Minister Gough Whitlam pours soil into hand of Vincent Lingiari, 1975 (Photo: Mervyn Bishop, Collection: National Gallery of Australia)



Little is known about the language situation at Wavehill station during the cattle station days, however reports from Berndt and Berndt (1987) paint a picture of multilingualism, with Gurindji and Mudburra as the dominant languages, and an Aboriginal variety of English emerging from contact with white station labour.

Wavehill was a centre of gradual but continuous intermingling of what have sometimes been called tribes with differing language, territorial and cultural affiliations ... for general purposes the *lingua franca* was either Gurindji or Mudbara (Mudburra) or usually a mixture of both. Few of the non-Walbiri (Warlpiri) people could either speaker or understand more than a few words of the language spoken by the Walbri ... On account of their contact with Europeans, by whom so many of them were employed, most of the station people found it necessary to learn a certain amount of English. (Berndt & Berndt, 1987, p. 59)

In the final stages of the strike, Patrick McConvell was living and working at Daguragu as a linguist with the School of Australian Linguistics (later amalgamated into Batchelor College, subsequently BIITE). He observed that the common discourse practice was code-switching between different dialects of Gurindji and Kriol. In a recording of a

conversation between Gurindji men who were slaughtering a cow for meat, he found that a third of all utterances contained code-switching. This recording of code-switching has formed the basis of three papers (McConvell, 1985a; 1988a; McConvell & Meakins, 2005) and will be discussed in more detail in §4 and §5. McConvell takes a social motivations approach to the code-switching. However I will re-examine this data from a structural perspective (§4.4). It is likely that this code-switching grammaticalised incrementally to form the mixed language, Gurindji Kriol. McConvell and Meakins (2005) show that many of the patterns in the code-switching are present in the mixed language today. I discuss this process, particularly in relation to case morphology and alternational code-switching, in §5.

The situation at Kalkaringi probably differed little from other places in Australia in the 1970s. Since European contact, reports of multilingualism, code-switching and borrowing in the Australian context has been widespread. Both mixing between traditional languages, and mixing of traditional languages with English have been observed. For example in the 1970s, code-switching between Dyirbal and English was a common discourse practice of Dyirbal people (Dixon, 1980), and people in Maningrida also mixed traditional languages with each other and with English in conversation (Elwell, 1982). In the Torres Strait a discourse style called Ap-ne-ap (<half-and-half) was characterised by frequent switches between Torres-Strait Pidgin and Kalaw Lagaw Ya (Bani, 1976), and finally code-switching between English and Guugu Yimidhirr was observed as the unmarked register of the people of Hopevale in Queensland (Haviland, 1982).

2.4 The Gurindji people today

The invasion and subsequent penetration of European language and culture has had a lasting effect on the Gurindji. Nowadays most people live a more sedentary life in Kalkaringi and Daguragu, though travel between neighbouring communities and to the nearby town of Katherine is common. Knowledge of the Dreaming is still important to people's lives, and it continues to be passed down through the generations albeit in a somewhat reduced form. Gurindji cosmology has also been augmented with Christian

belief systems. Christian missionaries have been less harsh on Gurindji spirituality than missionaries elsewhere in Australia. Bible passages and hymns have been translated into Gurindji, and Gurindji beliefs are rarely directly challenged. In many ways, the Gurindji people have integrated the Christian system of beliefs into the Dreaming. For example the herd of wild donkeys which inhabit Daguragu are considered to be sacred, related to the donkey that Jesus rode on as he entered Jerusalem. The Gurindji say that these donkeys walk down from Marlukalarni, a nearby hill, where God places them. Older people get very upset when *kartiya* carry out annual culls to reduce their numbers.

The kinship system has also changed. Older Gurindji people complain about younger people marrying their love matches who may not be the partner designated by the subsection system. This change has transformed the kinship system such that children usually receive two subsection (skin) names, one which is derived matrilineally and the other patrilineally. Though this change is often viewed by older Gurindji people as proof of the breakdown of their society, the resystematisation of kinship structures may also be considered evidence for the strength of kinship and its ability to accommodate the changing world. In a sense, the reorganisation of the kinship system mirrors the development of the mixed language in its mix of traditional and new systems, and needs further investigation.

The communities of Kalkaringi and Daguragu are administered by a council office, and other facilities include an employment and welfare centre, health clinic, bakery, abattoir, store and school. There is little paid employment in the communities, and most people rely on welfare payments. The government-run CDEP (Community Development and Employment Program) program is a work-for-the-dole scheme which provides some part-time employment. Other people are employed as health workers or teaching assistants at the local clinic and school. Younger women look after their children and are primarily responsible for the well-being of older people. People's diets are based on the limited range of food found at the Kalkaringi store and are only supplemented in a minor way by bush foods. As a result there is a high incidence of diabetes and associated kidney failure among the Gurindji people. Though Kalkaringi has a government-run health clinic,

traditional bush medicines are still used to treat many common ailments, and medicine men are called on for more mysterious illnesses. Tensions between *kartiya* and the Gurindji often run high with both sides frustrated with the lack of understanding of each others' ways of operating. Many Gurindji people are clearly weighed down by the incompatibility of systems, finding the constant grind of negotiating the *kartiya* world very difficult. Other people exhibit an extraordinary resilience despite the imposition of *kartiya* practices and clear clashes between these and their own Gurindji systems.

The language situation developed post-contact in a number of ways. First, the introduction of English brought with it a number of contact languages including Aboriginal English, Kriol and Gurindji Kriol. Some dialect levelling has probably also occurred between Gurindji, Wanyjirra and Malngin, with the remaining language referred to as Gurindji. It is not clear what happened to Mudburra, which was reported by Berndt and Berndt to be used in this area during the cattle station era. Some Kalkaringi people still identify as having a Mudburra heritage, however the language is no longer spoken in this community, only further east. Gurindji Kriol has gained momentum among younger people and seems to have spread north into Bilinarra and Ngarinyman country. However it is not clear whether this is a case of language spread or whether mixed languages have developed in these places independent of Kalkaringi. More investigation is required. These languages and their functions were described in §2.2.

2.5 Social factors which contributed to the formation of Gurindji Kriol

It is significant that a mixed language arose in Kalkaringi, because, elsewhere in northern Australia, Kriol has steadily replaced the traditional languages. For example, to the north of Kalkaringi in Timber Creek (see map), the traditional languages of the Aboriginal people in the town and its satellite communities are Jaminjung, Ngaliwurru, Ngarinyman and Nungali. However the main language now spoken is Kriol. The traditional languages are only used by older speakers, and are usually mixed with Kriol. Younger speakers are not proficient speakers of these languages, however they do incorporate single words, usually nouns into the Kriol. In this way the traditional languages function as markers of

Jaminjung, Ngaliwurru, Ngarinyman or Nungali identity. Similar situations can be found all across the north of Australia, except in many parts of Arnhem Land and the Daly River region in the north-eastern part of the Northern Territory. Despite the dominance of Kriol, Gurindji has remained remarkably resilient. The question is then - why did a mixed language form in Kalkaringi where the rest of the north shifted to a variety of Kriol, with some exceptions including Lajamanu and the Daly River area which I discuss below? In this section I suggest that Gurindji Kriol is very much a product of the linguistic environment and socio-political history of Kalkaringi. In particular, the code-switching and political events of the 1970s provided the seeds for the emergence of this mixed language.

During the period from 1966-75 following the Gurindji Walk-Off, Gurindji people gained notoriety for their persistence in fighting the Vestey's and the Australian government for the return their traditional lands. Other Aboriginal people and sympathetic *kartiya* regarded them as a strong and courageous group for resisting, what many saw as, the inevitable dominance of the *kartiya* over their land, language and law. At this time, the Gurindji people set about establishing their own cattle station at Daguragu and steadfastly refused government assistance from Kalkaringi which was a welfare settlement at the time. They only accepted help from people who supported their cause, such as Union members. During this period, code-mixing between traditional languages and Kriol was the unmarked discourse practice, and in the case of Kalkaringi, Kriol was the language which provided the main grammatical frame for code-switching (McConvell & Meakins, 2005, and §4.3.1). A similar situation was most likely found in communities to the north. However mixing practices in these more northern areas represented a transitional stage in the shift to Kriol, while at Kalkaringi the code-switching gradually grammaticalised in the mixed language spoken today. Thus Gurindji Kriol represents the maintenance of Gurindji, in part. Where Kriol gradually replaced almost all of the lexicon and structure of the traditional languages in the north, significant amounts of Gurindji vocabulary and grammatical features remain in the mixed language making it unintelligible to Kriol speakers. Therefore I would suggest that the political and linguistic persistence of the Gurindji people and their language are inherently intertwined. The preservation of

Gurindji represents one arm of their resistance to cultural assimilation by marking out a separate Gurindji identity. One of the results of colonisation and the unyielding spread of Kriol was the homogenisation of the language and identity of many Aboriginal groups. However a separate Gurindji identity was both recognised and enacted through the continuing use of Gurindji in the mixed language. Thus Gurindji Kriol entails both modern and traditional values. Speakers are younger Gurindji people who have not grown up as traditional Aborigines, and have no wish to return to the traditional way of life. At the same time, they separate themselves from other Aboriginal people by staking claim to strength and respect that is associated with their name.

There is one good argument against these socio-political factors as the main motivation for mixed language genesis - a typologically similar mixed language, Light Warlpiri is spoken in the nearby community of Lajamanu (O'Shannessy, 2006). People at Lajamanu have a very different recent history. They are not associated with any landmark political event which may have strengthened their sense of identity. In fact the Warlpiri at Lajamanu occupy Gurindji land, which is the cause of much friction between Gurindji and Warlpiri people. Their presence on Gurindji land is the result of a *kartiya* decision. A number of Warlpiri families were brought from Yuendumu from 1949 onwards to prevent overcrowding, and the community in Lajamanu grew from there (O'Shannessy per. comm.). Far from grounding their identity in land, Meakins and O'Shannessy (forthcoming) suggest that other factors may have contributed to the formation of Light Warlpiri. First Warlpiri is spoken in other communities such as Yuendumu, Nyirrpi and Willowra to the south of Lajamanu. Lajamanu people constantly travel south to visit family and take part in ceremony. Knowledge of Warlpiri is therefore essential for maintaining familial and ceremonial links with these communities. This situation is quite different to Kalkaringi which is the only Gurindji-identifying community, though Gurindji and the traditional languages spoken in Pigeon Hole and Yarralin, Bilinearra and Ngarinyman respectively, are mutually intelligible. Lajamanu also has a bilingual school (Warlpiri and English) which has operated since the 1980s. Children are taught in Warlpiri in the earliest years before transitioning into English, and Warlpiri continues to be a medium of instruction to varying extents for the rest of their time at school. This

bilingual program has probably also contributed to the continuing use of Warlpiri in the community, both as Warlpiri and within Light Warlpiri. In contrast, Kalkaringi has an English-only school, as was noted in §2.2.1. Small Gurindji language programs have existed periodically, however the bulk of Gurindji children's schooling is delivered in English.

The differences between the socio-linguistic contexts of Kalkaringi and Lajamanu suggest that the period of the Gurindji strike and land claim may not be the sole factor which provided the necessary social conditions for the emergence of Gurindji Kriol. One commonality between these two communities which contrasts with many other places in northern Australia is that only one traditional language is associated with these communities. For example, in Timber Creek and its surrounding communities, people from at least four language groups were brought together. The communities were artificial social constructions, with different cultural groups living in much closer proximity than was traditionally found. This mix of cultures and languages differs from both Kalkaringi and Lajamanu where the communities grew from family groups into denser versions of the traditional social structure. In these communities only one main traditional language was spoken. McConvell (2007) suggests that the number of languages spoken in a community provides an essential clue as to why Kriol gained currency in some communities and not others. He proposes that a *lingua franca* was needed amongst community members, and Kriol suited this purpose. However in places where a common language was already spoken, Kriol was not required.

I would suggest that the number of languages represented in a community only provides part of the explanation for the almost complete shift to Kriol. In other areas where people from a number of language groups were brought together in equally disruptive circumstances, Kriol did not become the dominant language. For example, a number of Aboriginal people living in the Daly River area to the north of Timber Creek were shifted to the Catholic mission community of Wadeye. Although many languages were spoken by these people, Murrinh-patha, which is the language of the surrounding country,

became the *lingua franca* of this community. The loss of other languages of this area is ongoing, as Murrinh-patha becomes the dominant language (Nordlinger, per. comm.).

Another problem with McConvell's analysis is that it does not explain why Kriol seeped into communities, such as Kalkaringi and Lajamanu, which already had common languages, Gurindji and Warlpiri, respectively. The appeal of Kriol is not clear in these situations. It may have been the case that Kriol gained some currency because it helped the Gurindji and Warlpiri communicate with other groups and communities who were losing their traditional languages. Identity reasons may have also played a role. For example, the use of Kriol may have helped the Gurindji and Warlpiri link with a cross-cultural Aboriginal identity which only became salient with the arrival of *kartiya*.

In general it is likely that the combination of all of these social factors provided optimal conditions for the emergence of Gurindji Kriol. This mixed language is probably the result of simultaneous pressure from Kriol and the desire to maintain Gurindji for reasons of identity marking. Preserving Gurindji elements in Gurindji Kriol was made somewhat easier by the fact that Gurindji was the dominant language associated with Kalkaringi.

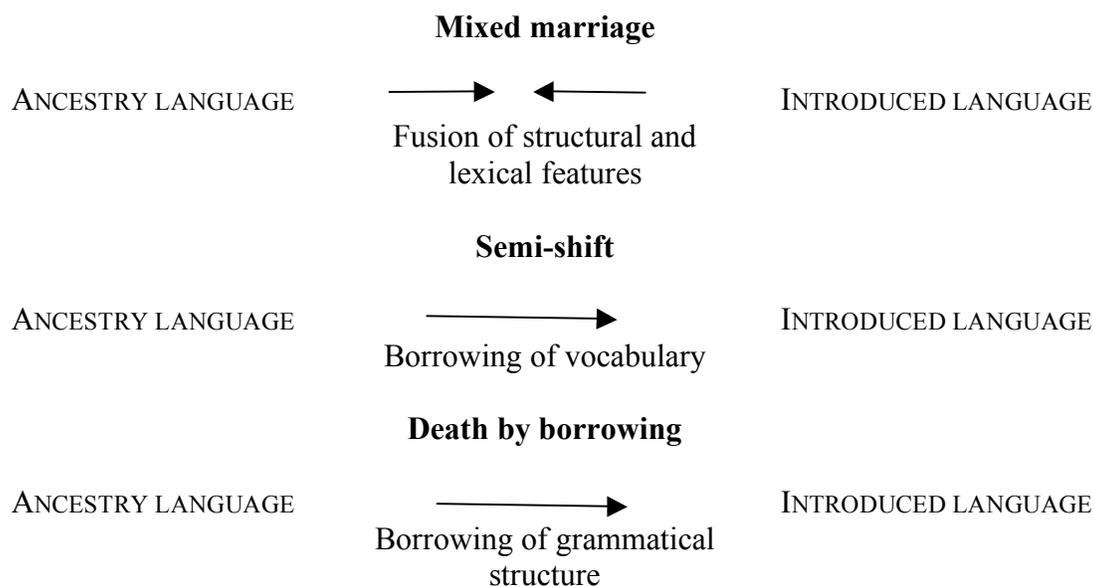
2.6 Sociolinguistic features of Gurindji Kriol in relation to other mixed languages

Few detailed historical accounts of the emergence of other mixed languages, or the sociolinguistic practices at genesis exist. However more general sociolinguistic characteristics of these languages have been discussed. Gurindji Kriol shows both similarities and differences with other mixed languages in this regard. I will consider three main areas: the *direction of language shift* which contributed to the formation of a mixed language (§2.6.1), whether speakers of mixed languages constitute a *separate ethnic group* (§2.6.2) and whether the mixed language is used as *the native language of the group* (§2.6.3). I will survey seven mixed languages - Michif, Mednyj Aleut, Chindo, Media Lengua, Ma'á, Lekoudesch and Anglo-Romani - and place Gurindji Kriol within this picture. Some comments about the sociolinguistic features of pidgin and creole languages will also be included as a reference point.

2.6.1 The direction of language shift

A number of theories of mixed language genesis are based on the direction of language shift between the ancestral language and the introduced language. Many of these theories are set within borrowing (Matras, 2003; Thomason, 2003) or code-switching theories (Auer, 1999; Backus, 2003; Myers-Scotton, 2003). Most of this work focuses on the grammatical interaction of the source languages and will be discussed in more detail in §3.5. Other work takes a broader approach looking at the socio-linguistic conditions which influence the direction of the language shift. For example, Croft (2000, p. 214-21; 2003, p. 52-60) proposes a social typology of mixed languages which is based on the change in dominance of languages within the process of mixed language genesis. He suggests this process may take one of three forms: death by borrowing, semi-shift and mixed language marriages (identification with a new society). His approach is based on the relationship between the ancestry language and the introduced language, and the direction of shift between the two languages. Mixed languages which are the result of mixed marriages represent a convergence of two languages. Semi-shift occurs when speakers of an ancestry language move part-way towards the introduced language but do not complete the shift. Finally death by borrowing involves languages which borrow to such an extent that they replace much of their basic vocabulary, and in more intense cases, grammatical elements. Finally, the direction of shift of these various mixed language types are summarised in Figure 12.

Figure 12 Direction of shift in mixed language genesis



The first category of language shift involves *mixed marriages* between men from one society and women from another (Croft, 2003, p. 57). The children of these mixed marriages formed their own distinct cultural identity, and the mixed language was an act of identity, in this respect. The relative dominance of the languages in this situation is less clear, and it is likely that they converged and fused. In this respect that they do not represent a clear shift in either direction. Michif is the classic example of this type of mixed language genesis (§1.5.1). This Canadian mixed language and its speakers are commonly described as the product of marriage between French-Canadian fur traders and Plains Cree women. Mednyj Aleut²³ also fits into this category. This mixed language was spoken on Mednyj Island in the Bering Straits. It probably emerged from mixed marriages between Aleut women and Russian seal fur traders in the early 1800s (Golovko, 1994, p. 114).

Croft's second category consists of mixed languages which undergo a *semi-shift*. A change in the dominance of languages occurs when speakers shift towards the introduced language. This process does not go to completion, and what remains is the mixed

²³ Mednyj Aleut is discussed further in §3.4.5.

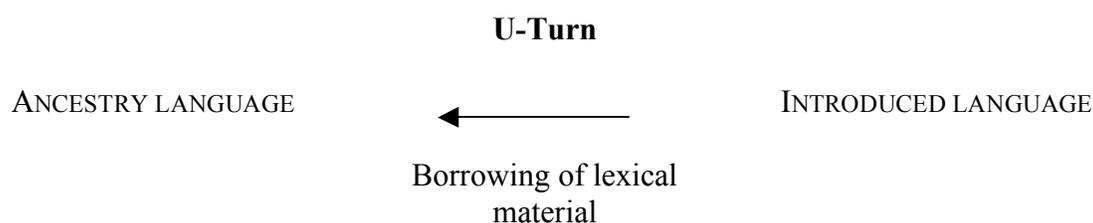
language. This shift stops part-way because the speakers may not have full access to the introduced language, or because the remaining part of the ancestry language may be a marker of social identity (Croft, 2003, p. 55). Croft offers Media Lengua as an example of a mixed language which resulted from a partial shift (see §1.5.1). The relexification of Quechua with Spanish was a consequence of Quechuan men working in Spanish-speaking cities, and becoming more fluent in Spanish which, in turn, influenced their use of Quechua. Media Lengua is the result of this language shift and the main language of this community of workers (Muysken, 1994).

Finally Croft considers Ma'á (or Inner Mbugu) and Para-Romani cases of languages of *death by borrowing*. He suggests these are the mirror-opposite of languages such as Media Lengua. Both languages result from the extreme absorption of another language's grammatical structure into the ancestry language. I introduced Ma'á and one variety of Para-Romani, Angloromani in §1.5.1. Briefly, Ma'á is a Tanzanian mixed language which combines a Bantu syntactic frame and non-Bantu, mostly Cushitic, lexical elements. Para-Romani varieties are spoken across Europe. They use Romani vocabulary within the grammatical frame of another language. Croft (2003, p. 53) suggests that these languages are spoken within societies which were under great social pressure. Whilst they attempted to avoid cultural assimilation, they gradually adopted more and more of the introduced language as it became more dominant. This view of the formation of Ma'á and Para-Romani varieties follows Thomason's (2001) proposal in terms of the direction of shift and the degree of borrowing. This proposal is not without controversy, however. For example Mous (2003b) suggests that Ma'á represents an attempt to undo the shift to Mbugu by maintaining basic Cushitic vocabulary. §3.5 will discuss this issue in more detail. In this respect, Mous' view of Ma'á fits better with Croft's second category of 'semi-shift'.

Though Croft suggests that mixed languages which are the result of 'death by borrowing' are the mirror opposite of the 'semi-shift' languages, he neglects a category of language which more truly represent the reverse direction of language shift - mixed languages which are a consequent of the complete shift to the introduced language, and then

partially relexify using what knowledge remains of the ancestor language. In this situation, the speakers are 1st language speakers of the introduced language and only partial speakers of the ancestry language. This is the socio-linguistic history Mous gives for Ma'á, for example (see §3.5). This direction of language represents a 'U-Turn', which is a term Boretzky and Igla (1994) uses to describe Angloromani's formation.

Figure 13 Reverse direction of shift



Even with this new category, Croft's marriage of the historical background with the typology of mixed languages is not entirely satisfactory in light of the history and structure of Gurindji Kriol. Typologically, Gurindji Kriol is a fusion of the structure and lexicon from two languages, yet Gurindji Kriol was not born out of mixed marriages. Historically Gurindji Kriol fits best into the socio-historical background shared by mixed languages, which Croft describes as undergoing a 'partial shift'. My aim here is not to create a new sociolinguistic classification of mixed languages, but to use Croft's fundamental idea of 'direction of language shift'. In the case of Gurindji, the shift was from the ancestry language, Gurindji, to the introduced language, Kriol. As was discussed in the previous section, at the time Gurindji Kriol began the process of becoming a mixed language in the 1970s, many Aboriginal groups in northern Australia were code-switching between their ancestry language and the introduced language, Kriol. This code-switching represented a shift towards Kriol as it gradually became the dominant language across the north. However in Kalkaringi this shift stopped. The change in dominance of Gurindji and Kriol did not go to completion perhaps due to the socio-political events of the time. As I have suggested, this period was marked by deep identity politics related to land ownership, and the mixed language was one enactment of a strong Gurindji identity. The Gurindji resisted cultural assimilation in a number of ways, and the interrupted shift

to Kriol was one aspect of this resistance. This notion of 'direction of shift' will become important again in a discussion of inflectional morphology and language dominance in §3.5.

2.6.2 Mixed language speakers as a separate ethnic group

Another sociolinguistic variable, which has been discussed in relation to mixed languages, is whether speakers constitute a separate ethnic group or a continuation of an older identity (Bakker & Mous, 1994, p. 2). Creoles are considered to be markers of a separate or more encompassing group of people. For example, though speakers of Kriol still identify with the smaller substrate language groups such as Marra or Rembarrnga, a larger identity of Aboriginality is marked through the use of Kriol. This identity contrasts again with the group of non-indigenous Australians which is associated with English. Mixed languages are spoken both by people who constitute a separate ethnic group, and those who do not.

First, mixed languages, spoken by new ethnic groups, generally derive from ancestral mixed marriages. For example, Michif speakers call themselves Métis which reflects the mixed identity of their group (Bakker, 1994, p. 14; Matras & Bakker, 2003, p. 2). Though there are few speakers of Mednyj Aleut left, at the time it was a strong language these speakers also formed a separate group, though they considered themselves Aleut, and regarded their language as a variety of Aleut (p. 117). Chindo or Peranakan Chinese is a mixed language which combines the grammar of Javanese and the lexicon of Malay. The Peranakans, or the speakers of this mixed language are seen as a separate ethnic group both by outsiders and themselves. They are from Indonesia and are the descendants of Chinese traders and Indonesian women (Matras & Bakker, 2003, p. 6).

Mixed languages are also spoken by people who *do not* constitute a separate ethnic identity. Speakers of Media Lengua are not separate from Quechua people though, as Muysken (1997b, p. 376) suggests, "Media Lengua came into existence because acculturated Indians could not identify completely with either the traditional rural culture

or the urban Spanish culture". In this respect they are a sub-group of the Quechua who identify to a certain extent with urban Hispanic society. Speakers of Ma'á are also not deemed separate from the Mbugu people in general. All Mbugu people use this variety alongside normal Mbugu. Ma'á is an in-group language which is considered incomprehensible to neighbouring Bantu people (Mous, 1994, p. 176-77). There are also a number of in-group mixed languages labelled secret languages. For example, the Jewish cattle-traders of Germany have relexified a Judeo-German dialect with Ashkenazic Hebrew from religious texts in a variety called Lekoudesch. These traders do not constitute a separate ethnic group but exist within the larger Jewish community (Matras, 2000). Similarly the Para-Romani varieties are not spoken by people who are considered a separate group from Gypsies. One variety, Angloromani uses Romani words within an English structure as the in-group language of the Gypsies. Boretzky and Iga (1994, p. 47) suggest that children do not currently learn Angloromani as a first language, however it is acquired around the age of 10 as children join their parents working. Thus speakers do not constitute a separate ethnic group, but continue to identify with their ethnic ancestry through the mixed language.

From this brief survey, it can be seen that there is not a single coherent story of ethnic identity which may be associated with the genesis and use of mixed languages. Two main processes seem to be apparent. As Thomason suggests below, the new language is either associated with a new identity, or it is seen as a means of continuing an ancestral group membership.

Historically some arose abruptly, as symbols of new ethnic groups, while others arose, probably over a longer period of time, as minority ethnic groups clung to their old cultural identity, resisting total linguistic assimilation to a dominant group. But it is surely premature to draw firm conclusions about what linguistic and social processes can and can't produce bilingual mixed languages: the number of well-understood languages of both types is so very small that we don't have much to go on. (Thomason, 2003, p. 25)

I suggest that Gurindji Kriol falls into the latter category. Speakers of this mixed language do not belong to a separate ethnic group. This mixed language is spoken by

Gurindji people whose parents and grandparents were predominantly speakers of Gurindji until at least the late 1940s. Gurindji Kriol speakers continue to identify as Gurindji and also call their mixed language Gurindji. Therefore it bears most similarity to the in-group languages of the Quechua and Mbugu. The strong maintenance of Gurindji lexicon and noun phrase structure in this mixed language marks the Gurindji as separate from other Kriol speakers, and indeed the encroaching and assimilative non-indigenous world. The Gurindji Kriol speakers, who tend to be younger members of the community, maintain their association with their Gurindji ancestry, but also mark their language as different from the older people. For example, they still have access to the old language (Gurindji is still spoken by older people), however the younger Gurindji Kriol speakers choose to mix it with Kriol in the form of Gurindji Kriol.

2.6.3 Mixed languages used as a native language

Related to the association of mixed languages with a new or continued identity is their use as native languages in the speaker communities. There are a couple of ways that 'native-ness' may be defined. A mixed language may be independent from its input languages, that is speakers have no knowledge of the input languages. Alternatively a mixed language may be the main language of use within a community of speakers, where the source languages are still spoken.

Independence can be defined by speaker use. In these cases speakers do not use or understand the input languages and therefore the mixed language is spoken in isolation from these languages. This criterion is used to distinguish creole languages from pidgins. Whilst pidgins are usually associated with a particular domain such as trade and therefore are not a first language for speakers, creole languages are usually the first language of a community and tend to exist in a greater degree of isolation from their source languages. In fact Michif is the only mixed language which is spoken independent of its source languages. Michif people no longer speak either of the contributing languages, French or Cree. English is spoken and has now become the principal language in the communities (Matras & Bakker, 2003, p. 3), with only older people using Michif.

The majority of mixed languages are the native language of a community, however they are spoken alongside one or more of their source languages. Smith (2000) calls these languages, *symbiotic* mixed languages. For example Mednyj Aleut was spoken concurrently with a number of Aleut dialects and Russian, though it is not clear whether Mednyj Aleut speakers had control of one or more of its input languages (Golovko, 1994, p. 114). According to Muysken (1994, p. 210), Media Lengua is learnt either as a first or second language. Middle-aged speakers of this mixed language also may have access to both input languages. Younger speakers tend to speak Spanish better and older speakers, Quechua. Chindo speakers also can speak a number of other languages which may include Indonesian and one of the mixed language's sources, a variety of Javanese (Matras & Bakker, 2003, p. 6). All Mbugu speak both Ma'á (Inner Mbugu) and its grammar input language (Outer) Mbugu on a regular basis in conversation. They also learn the dominant Bantu language in the area, Shambaa, and Swahili, which is the national language of Tanzania. Speakers of Lekoudesch are still in contact with both German and Hebrew, though only in a written form. Finally English, the grammar language of Angloromani, is the main language for speakers of this mixed language.

Gurindji Kriol patterns with the majority of mixed languages. It has become the native language of Kalkaringi, though Gurindji and Kriol are still used to varying extents, as was discussed in §2.2. Gurindji is still spoken in the community by older people, though it is often code-switched with Kriol or English. Kriol is not spoken without some mixing in the community, however Kriol is the main language used by Aboriginal people in the main town where Gurindji people often spend time - Katherine, 470km away. Gurindji people can and do speak Kriol to Aboriginal people from other areas. In this respect speakers of Gurindji Kriol still have access to both input languages. Younger speakers of Gurindji Kriol do not have an active knowledge of Gurindji, though they do understand the old people. They have a better active knowledge of Kriol.

In conclusion, there are a lot of differences in the socio-historical backgrounds of mixed languages. The only generalisation which may be made is that mixed languages arise

within a group and may act as a marker of in-group identity (Golovko, 2003, p. 191; Muysken, 1997b, p. 375). This function contrasts with pidgin and creole languages which are a means of *inter*-group communication, where a common language does not exist. Indeed Gurindji Kriol grew from within the Gurindji-speaking population where they had no need for a *lingua franca*. Yet the social situations that mixed languages arise in says little about their resultant structure. For example both Michif and Gurindji Kriol are V-N split languages, however Michif is the product of French-Cree mixed marriages and Gurindji Kriol a partial shift towards Kriol. Conversely, similar language environments do not produce similar patterns of mixing. Like Gurindji Kriol, Media Lengua is the result of a partial shift towards the colonial language, however it exhibits a split between the grammar and lexicon where Gurindji Kriol distributes the structural and lexical load between Gurindji and Kriol more evenly. Thus it seems to be the case that different contact situations can result in similar mixed languages, and that different mixed languages may arise from similar contact situations. The resultant structure of mixed languages is largely due to the structures of the source languages. Thus, while the socio-linguistic environment provided fertile ground for the process of mixed language genesis, the resultant shape of the language is largely a product of structural interaction.

To conclude, this chapter has described the sociolinguistic context where Gurindji Kriol is spoken and provided a descriptive account of the socio-historical background that led to the development of this mixed language. Further basic documentation of Gurindji Kriol can be found in Appendix 1 - a grammatical sketch of this language. The rest of this thesis explores the results of contact between Gurindji and Kriol nominal systems. §4-§5 provides an historical account of the development of Gurindji-derived case morphology in Gurindji Kriol, and §6-§9 describes the current function of this morphology using quantitative methods. §3 begins the developmental section with a discussion of the rarity of finding inflectional morphology from language in the grammatical frame of another language in contact situations. This level of syntactic intertwining occurs in Gurindji Kriol, where inflectional morphology in the form of Gurindji-derived case marking is used within a Kriol morpho-syntactic frame.

3. THE EFFECT OF LANGUAGE CONTACT ON INFLECTIONAL MORPHOLOGY

3.1 Introduction

The previous chapter gave an overview of the socio-historical origins of Gurindji Kriol. Further description of this mixed language, specifically its structure is available in §A1. From this point onwards, I focus on the evolution and function of Gurindji-derived case morphology in Gurindji Kriol. The following three chapters consider the development of these case markers from their source in Gurindji-Kriol code-switching to their incremental integration into the mixed language via alternational structures. The final chapters examine the use of these case markers in Gurindji Kriol, and their functional transformation from their Gurindji source. This chapter begins the section on the integration of case morphology into the mixed language frame by reviewing the literature on the outcomes for inflectional morphology in situations of language contact.

In Gurindji Kriol, the presence of inflectional morphology in the form of Gurindji-derived case marking is particularly noteworthy given that Kriol provides the verbal frame including tense and mood auxiliaries, and transitivity and aspect markers. Indeed the V-N structural split of this mixed language is characterised by the coupling of nominal inflectional morphology from Gurindji with a Kriol-based verbal system. This

split was described in §1.2, and the nominal and verbal grammars are examined in more detail in §A1.6.3 and §A1.11, respectively. The integration of case marking into the structure of Gurindji Kriol is significant because the maintenance or transference of inflectional morphology in many cases of language contact is, in actual fact, rare. As this chapter demonstrates, inflectional morphology is rarely borrowed (§3.2), and is also only generally derived from the dominant of the two interacting languages in classic or insertional code-switching (§3.3). Although I focus on these two types of language contact because they are the most relevant to the formation of mixed languages, also of interest are pidgin and creole languages which generally contain little inflectional morphology - though this is a point of contention - and cases of language obsolescence and death where inflectional morphology is one of the first grammatical systems to be affected (§3.4). In contrast, inflectional morphology from both interacting languages is maintained in a small number of mixed languages, for example Michif, Mednyj Aleut and Light Warlpiri (§3.5). Thus inflectional morphology has a special status in contact situations. It provides a good litmus test for the relative strengths of the interacting languages. It is often one of the first systems to be lost from the weaker language, and is affected less in the dominant language. In this respect, the maintenance of nominal inflectional morphology from one language where the other language provides the verbal frame, as is shown in Gurindji Kriol, is an indicator of the more equal status of both languages in the mix. Just how this state of affairs comes about is the topic of the following two chapters.

3.2 Borrowing and inflectional morphology

The status of inflectional morphology in *borrowing*²⁴ has received much attention due to the apparently difficult nature of transferring this type of morphology, which stands in contrast to the situation described for Gurindji Kriol. In this section, I discuss the treatment of inflectional morphology by borrowing processes in terms of descriptive approaches (§3.2.1) and explanatory approaches (§3.2.2 and §3.2.3). The first approach

²⁴ Muysken (2000, p. 69 onwards) does not formally distinguish borrowing and code-mixing. However much of the contact literature treats these phenomena as distinct processes, and for this literature review I will follow this distinction.

posits borrowability hierarchies based on borrowing tendencies gleaned from cross-linguistic surveys. This approach is largely descriptive, producing scales of grammatical categories which behave differently in the context of borrowing. The second approach to borrowing is more explanatory. It aims to produce either (i) structural (Heath, 1978; Weinreich, 1974 [1953]) or (ii) social (Thomason, 2001; Thomason & Kaufman, 1988) explanations for the results of borrowing. In the first of these explanatory accounts, structural constraints are said to affect the ability of morphemes to transfer from one language to another. The social constraint approach suggests that any morpheme may be borrowed; however the intensity of the contact situation determines the degree of borrowing. In this respect, Thomason and Kaufman also posit a borrowing hierarchy, however they provide an account for the shape of the hierarchy where the more descriptive approaches do not. In general I show that, though it is theoretically possible to borrow inflectional morphology, in fact few accounts exist in the literature, supporting the idea that the preservation of this type of morphology in language contact is exceptional.

The mechanisms of *borrowing* in language contact situations have been used as an explanatory framework for mixed language genesis (Matras, 2003; Thomason & Kaufman, 1988). These approaches will be discussed in §3.5.

3.2.1 What can be borrowed? Descriptive approaches.

The study of borrowing patterns and constraints began as early as 1881 with William Dwight Whitney who created a hierarchy of borrowing according to grammatical categories. Nouns were considered the most susceptible to borrowing, followed by other parts of speech, suffixes, inflections and finally sounds (Whitney, 1881). In this scale, Whitney did not preclude the borrowing of inflectional morphology, however he did suggest that it was extremely unlikely. Similar views were expressed later (see for e.g. Sapir, 1927). In particular, Haugen (1950, p. 224) conducted a study of borrowing in American Norwegian and American Swedish and found that nouns were the least resistant to borrowing followed by verbs, adjectives and interjections. He did not include

morphology on this scale, however he concluded that "the more structural a feature is, the less likely it is to be borrowed" (p. 225). Singh's (1982) study of English borrowings into Hindi also produced a similar hierarchy:

nouns>adjectives>verbs>prepositions

Further evidence for this type of scale comes from a study of 'borrowability' which was included in Greenberg's language universals program (Moravcsik, 1978). Moravcsik (1978, p. 110-12) posited six constraints on borrowing which constitute a descriptive implication hierarchy. She suggests that non-lexical items will not be borrowed unless some lexical items have already been borrowed (lexical>functional), borrowed lexical items such as verbs will only be observed in a language if borrowed nouns are already present (nouns>other lexical items), and that "no inflectional affixes can belong to the set of properties borrowed from a language unless at least one derivational affix also belongs to the set" (derivational>inflectional) (p. 112). Again, Moravcsik does not exclude the possibility of borrowing inflectional morphology, however it is presented as extremely unlikely.

One borrowing hierarchy which does provide some explanation for differences in the likelihood of borrowing different syntactic elements is Muysken's (1981) study of Spanish borrowings into Quechua. The scale looks much the same as previous scales, with lexical elements dominating the "heavily borrowed" end of the scale:

nouns>adjectives>verbs>prepositions>coordinating conjunctions>
quantifiers>determiners>free pronouns>clitic pronouns>subordinating conjunctions

Muysken believes that the reason for the shape of these types of hierarchies is largely referential.

Since reference is established primarily through nouns, these are the elements most easily borrowed. More generally content words (adjectives, nouns, verbs) will be borrowed more easily than function words (articles, pronouns, conjunctions) since the former have a clear link to cultural content and the latter do not. (Appel & Muysken, 1987, p. 171)

Of course, as some of the previous studies of borrowing have noted, it is not only referential words that are borrowed. Though rare, borrowing of derivational and inflectional bound morphemes does occur. Muysken does not deal with functional borrowings in his study of Spanish and Quechua, probably because this contact situation does not include bound morpheme borrowings. Nonetheless, following the same reasoning it can be suggested that the lack of referential content of these types of morphemes could be posited as a reason for the paucity of examples of this type of borrowing.

3.2.2 Explanatory models of borrowing: Structural constraints approaches

Early work by Weinreich (1974 [1953]) provides the first explanatory model for borrowing. He goes beyond the observed difficulty of borrowing inflectional morphology to provide processes whereby these morphemes may be transferred. In doing so, Weinreich supports previous borrowing scales, such as Whitney and Haugen's, however he frames the scale in terms of the morpheme's degree of structural integration (p. 35). However Weinreich also goes further by considering borrowing not merely as a function of the inherent 'borrowability' of a morpheme, but as the compatibility of both languages in the borrowing relationship.

(T)he transferability of morphemes is considered as a correlate of their grammatical function in the source language and the resistance of the recipient language. (1974 [1953], p. 31)

Weinreich presents a number of factors which affect the likelihood of the transfer of functional items. First, he suggests that if the structures of the source and recipient languages are congruent, then transfer is strongly facilitated (p. 32-33). Weinreich also suggests that overt morphemes also tend to replace zero morphemes (p. 33), and the

"relatively unbound morpheme is most likely to replace its counterpart in another language if the latter is more bound and is involved in a greater variation of alternates" (p. 34). The last two suggestions relate to previous observations which have led to borrowing scales. Morphemes with complex functions are less likely to be borrowed than those which have simpler and more transparent functions (p. 34). This means that, due to their opaque nature, functional morphemes are less likely to be borrowed than morphemes with lexical content. This suggestion is similar to Muysken's in terms of the morpheme's referential value as discussed above. Moreover, Weinreich suggests that "the fuller the integration of the morpheme, the less likely the likelihood of its transfer" (p. 35). In other words the more salient the morpheme's boundary is, the easier it is to borrow.

In his study of linguistic diffusion in Arnhem Land (Australia), Heath (1978, p. 73) presents several cases of morphological transfer which do not support Weinreich's claims. For instance, he observes that a negative suffix was borrowed into Ritharrngu and replaced an unbound negative particle, *yaka*. This and other similar borrowings contradict Weinreich's suggestion that free morphemes are more likely to replace bound morphemes. In general Heath also notes that "in Arnhem Land we have found numerous examples of borrowing of case suffixes, whereas in European languages this is one of the rarest kinds of direct morpheme diffusion" (1978, p. 105). As a result he suggests some alternative factors which affect the 'borrowability' of inflectional morphology (Heath, 1978, p. 105-07).

1. Morpheme syllabicity (morphemes that are independently pronounceable)
2. Sharpness of boundaries between morphemes
3. Unifunctionality of morphemes (e.g. not portmanteau morphs)
4. Categorical clarity of morphemes (broader environment is not required to discern function)
5. Analogical freedom from other morphemic systems in the same language

Winford (2003, p. 92) does not actually believe that Weinreich and Heath's claims are necessarily in opposition. He suggests that they can be subsumed into three general categories where constraints for borrowing are based on:

1. Congruency of morphological structures
2. Transparency/markedness
3. Functional considerations

The first constraint follows Weinreich's proposal that borrowing is a function of the relationship between the source and recipient languages. If the structures of the two languages correspond typologically, then this similarity will facilitate a direct mapping of morphemes from one language to the other (p. 93). Conversely typological distance inhibits the transfer of inflectional morphology. This issue of structural congruence is relevant to the transfer of Gurindji case morphology into Gurindji Kriol and will be discussed in more detail in §4.4.2 within Sebba's (1998) notion of categorial congruence. The second constraint refers to the inherent complexity of the morpheme in question. Morphemes, which do not have single and easily retrievable meanings or functions, such as portmanteau morphemes, are less likely to be borrowed than morphemes with clear boundaries, and transparent functions (p. 95). The third category, functionally-based constraints, plays a minor role in borrowing. Winford suggests that it can nonetheless account for some instances of borrowing, where other explanations cannot. He notes that functional gaps in the recipient language can sometimes create the right conditions for morphological borrowing. In these cases, a new functional category is created in the recipient language (p. 96). In this respect, functional constraints are less about restraining borrowing than facilitating this process.

3.2.3 Explanatory models of borrowing: Social factors affecting borrowing

Weinreich (1974 [1953]), Heath (1978) and Winford's (2003) constraints on the transfer of inflectional categories are largely based on structures of the interacting languages. Thomason and Kaufman (Thomason, 2001; Thomason & Kaufman, 1988) provide an explanatory model of borrowing based on social factors, believing that features can be borrowed regardless of the typological distance between the affected languages (p. 53). They suggest that social factors play a fundamental and determinate role in the linguistic outcome of language contact (p. 33), and that, given the right level of social disruption, substantial structural borrowing is not unusual.

If there is strong long-term cultural pressure from source-language speakers on the borrowing-language speaker group, then structural features may be borrowed as well - phonological, phonetic and syntactic elements, and even (though more rarely) features of the inflectional morphology. (Thomason & Kaufman, 1988, p. 37)

Under Thomason and Kaufman's model, two social features are necessary for extensive borrowing - time and a level of bilingualism (p. 47). Extensive and prolonged community bilingualism is considered a necessary condition for borrowing structural elements of a language, such as inflectional morphology. The end result of Thomason and Kaufman's work is a borrowing scale not unlike those of Whitney (1881), Haugen (1950) and Moravscik (1978). Their scale differs in that it is based on the degree of contact rather than structural features, nonetheless it correlates very neatly with previous observations about the degree of borrowing of structural features.

Figure 14 Thomason and Kaufman's borrowing scale
(based on Thomason, 2001; Thomason & Kaufman, 1988, p. 74-75)

Degree of Contact	Borrowing Type	Features Borrowed
1. Casual contact	lexical	non-basic vocab before basic
2. Slightly more intense contact	lexical	functional vocab e.g. conjunctions and adverbs
	syntactic	only new functions borrowed
3. More intense contact	lexical	pre/postpositions, derivational affixes, inflect. affixes (attached to stem), pronouns, low numerals
	syntactic	change in word order, borrowing postpos. in a prepos. language
4. Strong cultural pressure	syntactic	extensive word order change, inflectional affixes (e.g. case)
5. Very strong cultural pressure	syntactic	typological disruption, changes in word structure (e.g. adding prefixes in suffixing language), change from flexional to agglutinative morphology

Under this model, borrowing of inflectional morphology correlates with intense cultural pressure. Thomason and Kaufman present this as a generally unstable phase of language contact, with three possible outcomes. The language group may shift rapidly to the dominant language, or undergo a slow attrition process, with both processes resulting in language death. Alternatively the language group may systematise and stabilise these borrowings, completely transforming the language. This is where, they suggest, mixed languages find their origins. I will discuss their borrowing explanations for mixed language genesis in §3.5.

In general, all theories of borrowing, whether social or structural and as far back as Whitney in the 1800s, recognise the possibility but nonetheless empirical rarity of borrowing inflectional morphology. Heath is the exception, noting that this type of borrowing is less rare in Arnhem Land. Inflectional morphology is quite conspicuous in

its absence in the transfer process. This will be shown to also be the case in the following section on code-switching.

3.3 Code-switching and inflectional morphology

Code-switching is another area of language contact where different types of morphemes exhibit different patterns of distribution. Inflectional morphology is accorded a special place in studies of code-switching. This type of morphology is often used to identify the dominant language of code-switching (Muysken, 2000; Myers-Scotton, 1993a; Treffers-Daller, 1994), and other proposals about the structural constraints on code-switching follow. These theories will be discussed in the following chapter in the context of Gurindji-Kriol code-switching from the 1970s, and the behaviour of inflectional morphology and the origin of the Gurindji Kriol (§4.4). However this section will focus on Myers-Scotton's (2002) Matrix Language Frame (MLF) model of code-switching because it deals specifically with the behaviour of different types of morphemes in code-switching, and in particular, inflectional morphology. This theory is also relevant for the discussion of mixed languages and inflectional morphology (§3.5). Data and further theoretical discussions about inflectional morphology and code-switching within other frameworks will be provided in the following two chapters.

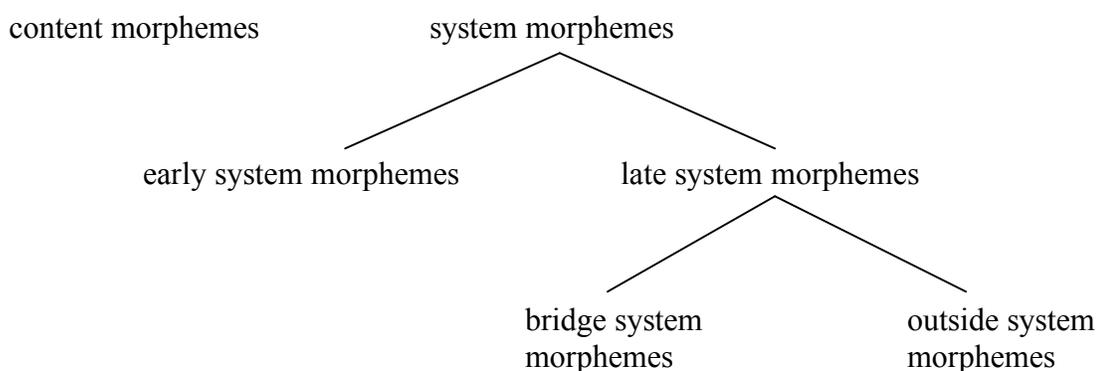
Code-switching, as a general term, refers to both mixing between and within sentences. Here I am only interested in *intra-sentential* code-switching where the grammatical systems of two or more languages come into contact and interact²⁵. Two main approaches to code-switching exist - social motivations accounts (Auer, 1998a; Fishman, 1964; 1965; 1972; Gumperz, 1982) and structural theories. Of interest here are structural accounts which examine the shape of code-switching, and the restrictions on mixing grammars. Muysken (2000) provides a typological description of code-switching including insertional and alternational code-switching. These will become relevant in §5.2. A number of theories of constraints have also been proposed. The earliest work comes from Poplack who posited the Free Morpheme Constraint and Equivalence Constraint (Pfaff,

²⁵ Muysken (2000, p. 1) uses the term "code-mixing" for intra-sentential code-switching, however for consistency I continue to use the term code-switching.

1979; Poplack, 1980; Poplack, Sankoff, & Miller, 1988; Sankoff & Poplack, 1981). DiSciullo, Muysken and Singh (1986) use Government and Binding theory to propose constraints based on government relations between sentential elements. Sebba's (1998) work on Categorical Congruence proposes constraints based on the typological match between languages. Finally, Myers-Scotton's (1993a; 1993b; 1998a; 1998b; 2000; Myers-Scotton & Jake, 2000a; 2000b) notion of the Matrix Language and the 4-M model has been influential in constraint-based theories of code-switching. These constraint-based theories will be discussed in terms of Gurindji-Kriol code-switching from the 1970s in the following chapter (§4.4).

Myers-Scotton's MLF model is based on two oppositions - the matrix language versus the embedded language, and content versus system morphemes. The matrix language is the dominant language which sets the grammatical frame for the code-switching, and the embedded language contributes content morphemes within this frame (1998a, p. 291)²⁶. How the matrix language is identified will be discussed in §4.3.1. Myers-Scotton classifies morphemes according to her own 4-M model. She divides them into *content* and *system* morphemes, with system morphemes further divided into *early* and *late* system morphemes. Late system morphemes are of two types: *bridge* and *outsider* morphemes. These are represented schematically in the diagram below.

Figure 15 Myers-Scotton's 4-M Model



²⁶ This model of code-switching is similar to Muysken *insertional* code-switching which will be discussed in §5.2.

First *content* morphemes participate in the thematic grid of the utterance. They assign or receive thematic roles, where system morphemes do not (1993b, pp. 98-99). Prototypical examples are nouns and verbs. On the other hand, *system* morphemes are more functional in nature. This category includes inflectional morphology amongst other morphemes. *Early* system morphemes do not assign or receive thematic roles, however they pattern with the content, adding extra meaning to the head of a phrase. These morphemes also depend on the head (a content morpheme) of their maximal projection for their syntactic role (Myers-Scotton & Jake, 2000a, p. 1063). Examples of early system morphemes in English include the determiner and the plural marker (Myers-Scotton, 2003, p. 77). *Late* system morphemes do not convey conceptual information, rather grammatical information is contained in these morphemes. Crucially they are structurally assigned outside of their maximal projections to indicate relations between elements in the CP rather than lower level phrases. There are two different types of late system morphemes: *bridge* system morphemes and *outsider* system morphemes. The difference between these two morphemes lies in where they receive their assignment. Bridge system morphemes depend on information from *within* their maximal projection, whereas outsider system morphemes rely on a source *outside* of their immediate maximal projections (Myers-Scotton, 2003, pp 78-79). Examples from English of *bridge* system morphemes are the expletive *it*, and *of* in possessive constructions such as "the foot of the hill". *Outsider* system morphemes include subject-verb agreement markers, and case morphology (Myers-Scotton & Jake, 2000a, 1065-66).

Within this morphological framework, Myers-Scotton (1993a, p. 83) predicts that, in code-switching, all system morphemes and therefore inflectional morphology will only come from the matrix language^{27,28} (1993a, p. 83). This prediction is called the *System*

²⁷ In situations where system morphemes from the weaker language (embedded language) do appear, she suggests that the functionally correspondent matrix language morpheme will also be present, double marking. Moreover the presence of the embedded language morpheme does not mean that it is functionally active. Indeed she considers them a type of production error (1993a, p. 98).

²⁸ This principle requires the identification of a matrix language. Unfortunately the identification of the matrix language is based on which language contributes the grammatical frame for the code-switching which becomes somewhat circular. See Myers-Scotton (2002, p. 59) for arguments against the circularity of the System Morpheme Principle and identification of the matrix language.

Morpheme Principle. A more detailed description of these morphemes and other code-switching principles will be provided in the next chapter in the context of Gurindji-Kriol code-switching (§4.4.1).

Myers-Scotton's predictions about the behaviour of inflectional morphology in code-switching is largely upheld by data. In her own work on Swahili-English code-switching she finds that, where Swahili is the matrix language, only English content words are inserted into a grammatical frame which consists of Swahili inflectional affixes. Muysken (2000, p. 155-56) observes similar patterns of mixing between Dutch and various languages including Malay, Sranan, Chinese and Turkish which act as matrix languages. On the whole, Dutch only contributes content words to these code-switching combinations. However other data, which contains inflectional morphology, provides counter examples to Myers-Scotton's System Morpheme Principle. Many examples can be found of inserted nouns accompanied by a plural marker from the same language rather than from the matrix language. Similarly past and present participle forms are often from the same language as the inserted verb (Muysken, 2000, p. 173-76). Interestingly plurals and these participle forms would be classified as early system morphemes under Myers-Scotton's 4M model which suggests that the System Morpheme Principle needs to be more specific about the predicted patterns of different types of system morphemes. Nonetheless, it is clear the behaviour of inflectional morphology contrasts with content words in its restricted ability to integrate into another language's grammar. While the category of inflectional morphology is perhaps too broad to make specific predictions, clear patterns emerge from more fine-grained distinctions of functional elements. In terms of inflectional morphology, code-switching and borrowing are very similar. In both cases, the language of the inflectional morphology is an indicator of the more dominant language in the mix.

Gurindji Kriol and its relationship to theories of code-switching will be discussed in the next chapter. At this stage, however, some general comments can be made regarding the behaviour of inflectional morphology in these two types of language contact. First it is difficult to identify a dominant language which provides the grammatical frame for

Gurindji Kriol, because the structural load of the two source languages is distributed according to the nominal and verbal systems. Due to the paucity of inflectional morphology in Kriol, it is not the case that inflectional morphology from both languages is present, however inflectional categories in verbal frame are realised by Kriol free forms, with case morphology provided by Gurindji (§1.2). Also of interest - where case morphology is found, there are no restrictions on the language of the stem. Both Kriol and Gurindji nominals can be inflected. This absence of a correlation between the presence of case morphology and the language of the stem is tested in the study of the ergative marker in §9.5.1, with no significant differences found. Thus Gurindji Kriol contrasts with code-switching, and the predictions made by Myers-Scotton in the MLF model. Moreover where violations were observed in other cases of code-switching, inflectional morphology seemed to be transferred attached to a stem. On the other hand, Gurindji Kriol allows switches between stems and inflectional morphology.

3.4 Pidgins, creoles, language obsolescence and inflectional morphology

Before moving to a discussion of the behaviour of inflectional morphology in mixed languages, I will briefly discuss inflectional morphology in two other contact situations: pidgin and creole languages, and language obsolescence. Only small amounts of inflectional morphology from the source languages of pidgins and creoles seem to be transferred in the process of their formation, and this type of morphology is one of the first systems to be lost in cases of language obsolescence. These two situations strengthen the observation that the maintenance of inflectional morphology in contact languages such as Gurindji Kriol is noteworthy.

First, in most introductory texts about contact languages the reader can expect to find a typological description of pidgin and creole languages which includes a cursory remark about the paucity of morphology in general and the lack of inflectional morphology. This brief observation is often followed by a more elaborate section on the socio-historical factors involved in pidgin and creole genesis (see for e.g. Winford, 2003, p. 276-81, and Thomason, 2001, p. 168 onwards). More recently, discussions about the status of

morphology in these languages has been resurrected. In particular, McWhorter's 1998 paper proposing a *Creole Prototype* sparked a closer examination of inflectional morphology in pidgin and creole languages. McWhorter (2005, p. 10) claims that these contact languages can be characterised by their lack of (i) tone contrasts, (ii) non-compositional derivational morphology, and, of particular interest here, (iii) inflectional affixation. McWhorter suggests that the presence of these three features is not accidental as they are related to "definable signs of youth in the structure of a new language" (2005, p. 10). McWhorter's Creole Prototype has been attacked from different angles²⁹, and was followed by two special volumes surveying morphology in a number of pidgin and creole languages (Plag, 2003a; 2003b).

On a whole, these surveys of pidgin and creole languages did not find inflectional morphology entirely lacking, however it was present in smaller quantities than their lexifier languages. Of course one of the problems with this observation is that that most of the lexifier languages of currently attested creoles (e.g. English, French, Dutch, Portuguese) contain relatively little inflectional morphology themselves. However there is at least one example of a creole, Kitúba, which has an agglutinating language as its lexifier language, Kikóngo (Bantu) (Mufwene, 1997). Kitúba is spoken in parts of Zaire, the Congo and Angola. Kikóngo has elaborate noun class and bound pronoun system, and subject-verb agreement, and verbal tense/aspect system. Different outcomes can be observed for these systems. First, the noun class system has been preserved, though some nouns have changed class. Subject-verb agreement has been lost completely, and, in the

²⁹ Mufwene (2000, p. 77) challenges the assumption that pidgin and creole languages are related developmentally, suggesting that creoles can arise without a prior pidgin stage and are in fact "socially disfranchised dialects of their lexifiers". DeGraff (2001, p. 54-57) also takes issue with McWhorter's general characterisation of creoles as simple. DeGraff refers to earlier and similar claims made by Seuren (1998) and Whinnom (1971). These criticisms of McWhorter must be set within a more general debate about the classification of creole languages based on typological characteristics rather than socio-historical features (Ansaldo, Matthews, & Lim, 2007). The former approach forms a part of what DeGraff (2004; 2005) labels *Creole Exceptionalism*, which he suggests is a colonial discourse within academic writings on creole languages that perpetuates the marginalisation of these languages and their speakers. It involves the "postulation of exceptional and abnormal characteristics in the diachrony and/or synchrony of creole languages as a class" (DeGraff, 2005, p. 534). DeGraff suggests that the typological category of a creole class is in fact a construct of this academic discourse. Given the history of less than favourable writings on creole languages and their speakers, this response has grounds. A heightened awareness of the discourse which is used to describe creoles has meant that phrases, which are emotionally neutral in typology or even historical linguistics, such as "the simplification of inflectional morphology" evokes intense feeling. Typological comparisons with so-called 'normal' languages have become highly charged debates.

case of the bound pronouns and TA suffixes, the grammatical categories of Kikóngo have been preserved, however they are expressed using free forms in Kitúba (only one verb suffix has been retained) (Mufwene, 1997, p. 175-79). Based on this evidence it would appear that creole languages have a tendency towards free forms, and where inflectional morphology encodes grammatical information in the source language, these free forms perform the same tasks in the creole languages.

This typological tendency is supported by the evidence for the paucity of verbal and nominal inflectional morphology discussed in Plag (2003a; 2003b). It is true that morphology is not entirely non-existent in pidgin and creole languages, however these languages still contain relatively little inflectional morphology compared with their source languages. Moreover much of the inflectional morphology is grammaticalised from free forms in the source languages, such as *-bala* (<fellow) and *-im* (<him) in Australian Kriol (Munro, 2005). This is evidence for a weaker version of McWhorter's Creole Prototype. In conclusion the expression of inflectional categories as free forms in pidgin and creole languages contrasts with a mixed language such as Gurindji Kriol which retains these categories as inflected forms.

If creolisation is considered to be language creation, then *language obsolescence* represents the opposite end of the scale of language change. Inflectional morphology is also affected in this process, and its loss is one of the first symptoms of language death. The susceptibility of inflectional morphology is indicative of the weakness of the waning language. Within this context, the presence of Gurindji-derived inflectional morphology in Gurindji Kriol can be seen to demonstrate the strength and resilience of Gurindji within this contact outcome.

Language obsolescence or death can be the result of a number of events including, most dramatically, the death of all speakers, or merely contact with more socially dominant languages. The latter form of language change involves a number of stages including (i) the shift from the L1 to the L2 as a primary means of communication, (ii) structural change in the L1, and (iii) language death and replacement by the L2 (Sasse, 1992a, p.

20). In the first and second stages of language death, code-switching is extremely common and may drive changes in the L1 (Winford, 2003, p. 260). Language death bears some resemblance to L1 attrition however it extends beyond individual language loss to a community of speakers. Nonetheless L1 attrition may be related to language death in that it may be one of the mechanisms of death, with imperfect learning another mechanism. Indeed death and attrition are often grouped together in descriptions of language loss (see for e.g. Winford, 2003, p. 256 onwards). Language death has also been used to refer to the complete loss of a language, such as the East Sutherland variety of Scottish Gaelic (Dorian, 1981), but also the loss of the use of a language in particular areas, such as Finnish in northern Minnesota (Larmouth, 1974).

Language death may have a number of consequences. Inflectional morphology is one of the first areas of grammar affected by this form of language change. Reduction in allomorphy, and the loss, restructuring or replacement of bound morphology by elements from the dominant language are common first signs of language death (Maher, 1991, p. 68). The most straight-forward effect of language death is the loss of particular inflectional systems. For example, semi-speaker varieties of Kore (Lamu Island, Kenya) can be characterised by the loss of number and gender affixes on nominals, and the loss of tense, aspect and negation markers (Dimmendaal, 1992, p. 119-25). Another feature of language death is the diffusion of L2 structural patterns into L1 while maintaining the L1 surface forms. Thus the inflectional forms from the L1 continue to be used, however these forms pattern according to the L2. For example, in a study of Hungarian-English speaking children in the United States, Bolonyai (2002, p. 21) notes that the children's use of spatial case marking is characterised by divergent patterns which match English concepts of space. Children were observed to make mistakes with the choice of illative and allative case marking. Standard Hungarian conceptualises home goals as surfaces and foreign place goals as containers. On the other hand, English does not distinguish these goals. Thus Bolonyai concludes that English interferes with the speakers' ability to use the Hungarian distinction. Another result of language death is the adoption of the L2 system which may gradually replace an L1 system. For example, it is common for structural case to be replaced by word order to express grammatical relations (Winford,

2003, p. 262). This situation can be found in the Australian context, in particular ergative case morphology has been observed to become optional as SVO word order from English or Kriol dominates (see §9.7). In general, the loss, restructuring or replacement of inflectional morphology in language death mirrors its behaviour in situations of borrowing where it remains a relatively unborrowable structural category in contrast with vocabulary which is more easily transferred.

3.5 Mixed languages and inflectional morphology

From the previous sections on the different outcomes of language contact, it can be seen that the transfer of inflectional morphology between languages is quite exceptional in its rarity. It is rarely borrowed and is almost never inserted into the matrix language of code-switched utterances. Inflectional morphology also only appears in small quantities in pidgin and creole languages in comparison with their source languages, and its loss is one of the first symptoms of language death. In contrast with these contact language situations, this type of morphology is striking in its presence in some mixed languages. Indeed, as I demonstrate, the most extreme cases of mixing retain inflectional morphology from both source languages. Matras (2003) and Thomason and Kaufman (1988) use the mechanisms of borrowing as means of attaching significance to the presence of inflectional morphology (amongst other elements) in mixed languages. Myers-Scotton (2003) presents a similar view of mixed languages from the perspective of her MLF model of code-switching. In terms of Gurindji Kriol, I follow the code-switching literature more closely in the next two chapters, however borrowing theories are also examined here. In this section, I first discuss these theories and then survey a number of mixed languages, including Gurindji Kriol, for the presence of inflectional morphology from both languages. I show that inflectional morphology from both source languages has been retained in a number of mixed languages, such as Michif, Mednyj Aleut, Sri Lankan Malay to some extent, and Gurindji Kriol. Where the presence or absence of inflectional morphology in other language contact situations is indicative of the relative strengths of the interacting languages, the presence of inflectional

morphology from both languages represents a less hierarchical relationship in these mixed languages, which has implications for theories of genesis.

First, the mechanisms of borrowing have been used to discuss the presence of inflectional morphology in mixed languages (Matras, 2003; Thomason & Kaufman, 1988). Of particular relevance for the identification and classification of mixed languages is the 'unborrowability' of certain grammatical forms and classes (Matras 2003, p. 158). Matras suggests that a particular feature of mixed languages is the seemingly unconstrained borrowing of grammatical elements, which in the past have been labelled as 'loan proof'. Included in the list of loan proof items is inflectional morphology. He (p. 171) goes on to suggest that this violation of borrowing tendencies is what characterises a mixed language. Matras uses observations of structural constraints in borrowing to suggest that the presence of rarely borrowed elements such as inflectional morphology characterises mixed languages.

The broader picture ... confirms that there are classes of elements in grammar that are less likely to be transferred among languages, both in situations of synchronic mixing and in cases of diachronic change involving contact. The density with which these generalisations are violated in MLs merits particular attention. (Matras, 2003, p. 159, where ML=Mixed Language)

He includes, in his assessment of the presence of these rarely attested borrowings, not only inflectional morphology such as case affixes, but also in/definite articles, bound pronouns and TAM markers, possessive markers, sentential negation, personal pronouns, demonstratives, existentials (copula), place deictics, the basic interrogatives *what* and *who*, numerals under 5, and adpositions which express basic local relations (*in, at, out of*) (Matras, 2003, p. 158-59).

Matras does not merely compare the behaviour of these elements with borrowing, he suggests that mixed languages are the *result* of exceptional and unusual levels of borrowing. In this respect, Matras implies a direction of transfer of components from one language to another. Matras labels the recipient language the INFL-language, and the source language the lexifier language. The INFL-language is "the source of the

grammatical structures involved in anchoring the predication" and it provides word order rules for the VP, coordination, concord and TAM markers. The lexifier language, as the name suggests, supplies all of the lexical roots for the mixed language (p. 163-65). This distinction is not unlike Myers-Scotton's and others notions of a matrix and embedded language in code-switching. Matras suggests that the lexifier language feeds these roots into the grammatical frame provided by the INFL-language.

(O)ne cannot, in my view regard the 'grammar' and 'lexifier' languages as having equal hierarchical status in the evolution of MLs, either. Rather, the INFL-language is the base into which lexifier language material is incorporated. (Matras, 2003, p. 165, where ML=Mixed Language)

It is in the direction of borrowing that I think Matras' theory of mixed language genesis and classification begins to become problematic. There is a logical flaw in saying that mixed languages are characterised by extreme borrowing, that is borrowing of inflectional morphology, when the recipient language or INFL-language itself is partly defined by verbal inflections³⁰, and in fact few nominal inflectional borrowings from the lexifier language can be observed. Considering Matras' survey of mixed languages and analysis more specifically - of the mixed languages which Matras surveys (Ma'á, Michif, Media Lengua, Mednyj Aleut, Para-Romani, Lekoudesch and Jenisch), the copula tends to pattern with the INFL-language in cases of historical continuity (Michif and Media Lengua) and the lexifier language where language shift has occurred (p. 167). Negation follows the lexifier language only in the secret mixed languages (Lekoudesch and Jenisch), as do genitive possessive constructions (p. 168). Deictics and pronominals tend to come from the lexifier language (except in the case of the secret languages). In these categories, Matras demonstrates the presence of 'loan proof' borrowings in the INFL-languages. In terms of much more rarely borrowed categories, such as inflectional morphology, most of the verb phrase inflections come from the INFL-language. In fact this is one of his definitions of the INFL-language which discounts verbal inflection as a test of extreme borrowing.

³⁰ Matras' argument does not suffer as badly from the circularity of Myers-Scotton's definition of a matrix language because elements other than verbal inflectional morphology are used to define the morpho-syntactic frame of the mix.

In Matra's analysis, noun phrase inflections are then the main test of the degree of transfer. Matras finds that "it is noteworthy that noun phrase grammar, including inflection grammar does not always pattern with the INFL-language" (p. 169). This is true to an extent, however the inflection grammar generally does come from the INFL-language and, in particular, inflectional morphology such as plural markers and case morphology do pattern with the INFL-language, except in the case of Mednyj Aleut, and Michif plurals which I will discuss below. In contrast, the case system of the lexifier language, Romani (8 cases, partly flectional, partly agglutinative (Boretzky & Iglá, 1994, p. 36)) has not been borrowed into the Para-Romani mixed languages. So despite the number of loan proof categories that are absorbed from the lexifier language into the INFL-language, much of the inflectional morphology, particularly bound morphology remains from the INFL-language. Therefore in relation to the borrowing scales, Matras's picture is not one of extraordinary borrowing, rather of extraordinary *lexical* borrowing, in terms of quantity. In a sense the direction of borrowing is assumed, and unidirectional, from the lexifier language to the INFL-language. In fact, Gurindji Kriol is a better example of the point Matras wishes to make. If Kriol is considered the INFL-language, then nominal inflections from Gurindji are also present. Though I do not discuss Gurindji Kriol within the context of borrowing, a related analysis of the exceptional level of mixing is given below.

In contrast with Matras, Thomason and Kaufman entertain the idea of borrowing in the reverse direction. They suggest that mixed languages may be the result of heavy grammatical borrowing, including inflectional morphology, where all that remains of the old language is lexical material as the grammatical frame has been borrowed from another language:

(F)or reasons of stubborn language and culture loyalty, the pressured group may maintain what it can of its native language while borrowing such large portions of the dominant language's grammar that they replace all, or at least sizable portions of, the original grammar. (Thomason & Kaufman, 1988, p. 100)

Thomason and Kaufman (1988, p. 103-04) provide Angloromani and Ma'á as examples of a cultural shift so disruptive that they allowed for the wholesale adoption of the dominant groups' grammatical system. However the case for massive grammatical borrowing is not clear cut, and counter claims which favour relexification of the dominant language using the ancestry language are made for both of these examples (for Angloromani see for eg Boretzky & Iгла, 1994, p. 61). I will look at the case of Ma'á more closely.

Ma'á is spoken by Mbugu communities in the Usambara mountains in Tanzania, who also speak Mbugu, a Bantu language. This mixed language combines Bantu grammar, similar to Pare, a neighbouring language, with a lexicon composed of Southern Cushitic and Bantu words. The Mbugu were originally a Cushitic-speaking group from Lackipya in Kenya. In order to escape persecution from the Masai, they shifted to the Usamba mountains via the Pare mountains. The mixed language, Ma'á is considered to be the result of a resistance to assimilation with the Pare, representing the stubborn persistence of an ethnic group (Mous, 1994, p. 175-76). Thomason (1997a, p. 481-83) believes that Ma'á is the result of massive grammatical borrowing from Pare, including *inflectional* categories, for example noun classes, with only some minor differences. In this respect, Ma'á exemplifies the fifth and most intense of their borrowing categories (which was described in §3.2.3). However this view differs sharply from Brenzinger (1987), Sasse (1992b) and particularly Mous (1994; 2000; 2003a; 2003b) who believe that Ma'á is a conscious and deliberate result of an attempt to undo a shift to Pare, where speakers tried to relearn their ancestral language (Mous, 2003b, p. 89). Mous suggests this happened through a para-lexification process where a Bantu lexicon, and Cushitic and Masai lexicon exist in parallel. Mbugu draws from the Bantu lexicon, and the presence of Cushitic and Masai words is characteristic of Ma'á. In this sense, he considers Ma'á to be a register of Mbugu (1994, p. 96-97; Mous, 2003b), not entirely unlike, but probably more extreme than, the cases of lexical manipulation found in urban youth languages, slang and taboo codes (Mous, 2003a, p. 217). In the end Mous classifies Ma'á as a Bantu language, which is problematic for its status as a mixed language. Mixed languages are, by definition, unclassifiable by traditional historical methods (Bakker, 1997).

To me the classification of Ma'á can be compared to that of whether to refer to a transvestite as "he" or "she". At first sight Ma'á may seem to be Cushitic; closer inspection reveals that it is Bantu but trying desperately to hide the fact. Once we know the reality we may still feel uncomfortable with calling Ma'á Bantu when the core vocabulary is clearly not Bantu but that does not mean Ma'á is unclassifiable: It is a Bantu language even if the speakers want it to be non-Bantu and even if the forefathers spoke a Cushitic language.

In terms of defining mixed languages with respect to inflectional morphology and borrowing, there is an important difference between these two perspectives which relates to the direction of borrowing. On the one hand, Thomason suggests that a whole grammatical system, including inflectional morphology has been borrowed, and on the other hand Mous presents a much more conservative picture of lexical borrowing. Indeed the process of para-lexification or lexical manipulation does not even involve supplanting one set of lexical items with another. Thomason's more extreme picture correlates with her borrowing scale in terms of the degree of social disruption involved in the creation of Ma'á. It is clear from the oral history of the Mbugu that this level of social disruption is a part of the socio-linguistic picture. However, though a massive social disruption occurred, it does not follow that massive grammatical borrowing must result. For example, creole languages are often born in situations where one group has severe dominance over another, yet inflectional morphology is rarely transferred from the source languages into the resultant creole language §3.4. In this respect, social variables cannot be used as predictors for borrowing. Moreover I suggest that Thomason's account of Ma'á would seem more likely if aspects of the Cushitic grammar were present as well as Bantu grammar. It seems extremely unlikely that a language would completely replace its grammar with another language's grammar, without residual elements of its own grammar being present, either in form or affecting the distribution of the borrowed grammar. Indeed Mous' account - that speakers attempted to revitalise their traditional language through relexification as an act of identity - seems more likely than the idea that they borrowed another language's grammar wholesale.

Given the difficulty of borrowing inflectional morphology, what is interesting about Ma'á and indeed other mixed languages is its presence. However, as has been shown, presence alone is not always significant because the existence of these morphemes in mixed languages may be attributed to either (i) the retention of inflectional morphology from the recipient language (INFL-language), (ii) its transference from the contributing language (lexifier language) to the INFL-language, or (iii) the transfer of inflectional morphology from the INFL-language into the lexifier language. Clearly transference is the more significant of these two options, with the third option presenting the most extreme scenario, though empirical evidence for this option is somewhat lacking.

From the standpoint of mixed language theory, adopting any of these theories of transference or borrowing has ramifications for the understanding of how mixed languages form. Borrowing implies directionality, that is morphemes moving from one language to another, and moreover the relative strength of the interacting languages. A borrowing-based theory of mixed languages requires one language to be the source and another to be the recipient, with the recipient language the stronger of the two. Matras (2003a) uses the terms lexifier and INFL-languages, assuming a unidirectional relationship between them where the lexifier language is the source, and the INFL-language is the recipient. Thomason suggests that the reverse direction is also possible, allowing for mass grammatical borrowing in, for example, Ma'á and Angloromani. It is not clear in this scenario whether the stronger language is the recipient or source language. In the next chapter I will suggest that, in the case of Gurindji Kriol, Kriol acted as the recipient language with Gurindji-derived case morphology transferring into its morphosyntactic frame. For this analysis, I draw on the code-switching literature.

Within the code-switching literature, Myers-Scotton (2002; 2003) deals with this issue of directionality, inflectional morphology and relative language strength with a twist to her MLF model. She (2003, p. 91) suggests that mixed languages are the result of a shift in dominance of the interacting languages and the fossilisation of code-switching. The matrix language and embedded language begin the process of swapping roles. The embedded language gains strength and begins to contribute a significant amount of

material in the form of system morphemes to the morpho-syntactic frame of the mix. However this turnover fossilises half-way, for various social reasons, resulting in *composite* matrix language which characterises a mixed language. Myers-Scotton calls this process the Matrix Language Turnover hypothesis. The outcome is a language which contains late system morphemes such as inflectional morphology from the weaker language, that is the language which was the embedded language in the code-switching (2003, p. 92). Myers-Scotton (2003, p. 91) also suggests that the loss of late system morphemes from the more dominant language (the prior matrix language) or the reanalysis of morphemes from the weaker language to function in syntactic roles is also evidence of a fossilised turnover. Thus Myers-Scotton produces a much more restricted definition of a mixed language, than the borrowing criteria set out by Matras. For example, mixed languages, such as Media Lengua, which mix one language's grammar with another's lexicon do not qualify according to Myers-Scotton's criteria (2003, p. 91), though what they represent is then not clear.

I suggest that Myers-Scotton's late system morpheme criterion is probably too restrictive, particularly given that grammar-lexicon mixes make up the majority of identified mixed languages (see §1.5.1). Indeed the only languages which would qualify would require something like a very specific mix of structural case morphology from one language and subject-verb agreement from another. Thus I propose that the *degree* of intertwining is probably a more inclusive approach to the classification of mixed languages rather than morphological benchmarks. The notion of 'degree' also incorporates Matras' and Thomason's borrowing theories of mixed language genesis. First, grammar-lexicon mixes such as Media Lengua should not be excluded from the category of mixed language, however it is true to say that they represent relatively low levels of intertwining. These languages typify a unidirectional process akin to borrowing or code-switching where a dominant language provides the bulk of the structural material with weaker language inserting lexical material into this grammatical frame. This situation represents the retention of structural material rather than transference. Other mixed languages may exhibit a higher level of syntactic mixing, which demonstrates a shift in the weight or strength of the interacting languages, though one language still clearly provides most of

the structural material and is therefore easily identified as the matrix language. The formation of the types of mixed languages can also be explained under a more unidirectional system. At the most extreme end of the mixed language scale are the languages which contain significant amounts of structural material from both languages, such that neither language dominates. No one language can be identified as the matrix language, but rather the matrix language represents a composite of the languages, as suggested by Myers-Scotton. Gurindji Kriol represents such a case with Kriol, the language of the verbal inflectional categories, combining with Gurindji nominal inflections. In examples such as Gurindji Kriol where a composite matrix language is found, a borrowing or code-switching model of mixed language genesis which favours a direction of transfer is not obvious from the end result, though socio-historical information may provide some clues. However even where directionality can be established, just how inflectional material from one language is integrated into the morpho-syntactic frame of another language is not clear, and this is the subject of the following two chapters for the case of Gurindji Kriol. Thus, in general, I suggest that Myers-Scotton's classification of mixed languages, as a class of contact languages, which contains late-system morphemes from the weaker language, is just one category of mixed language, but represents the most extreme potential.

It is not my intention to produce a typology of mixed languages based on degrees of intertwining and relative language strength. However I wish to explore the more extreme end of this characterisation of mixed languages, as a point of comparison for Gurindji Kriol. Regardless of where the morphological line is drawn for a language to qualify as fully mixed, a language which contains inflectional morphology from both languages exhibits an extraordinary level of syntactic intertwining. If the use of inflectional morphology is taken as being indicative of the relative strength of the languages, then the interacting languages in this situation have a more equal status than other forms of language contact, or indeed grammar-lexicon mixed languages. Moreover issues of directionality and transfer of morphemes, whether by borrowing or insertion, take on a new dimension. Inflectional morphology in this level of language contact neither disappears nor is selected for by only one language. In this respect, these types of

languages contrast with the other results of language contact which have been described in this chapter. A number of mixed languages contain inflectional morphology from both source languages, with both languages therefore contributing to something like Myers-Scotton's composite matrix language. These languages include Michif, Mednyj Aleut and Sri Lankan Malay³¹. Each will be examined below, and Gurindji Kriol will be discussed with respect to these languages.

First, inflectional morphology from both French and Cree is present in *Michif*. Verbal inflections are derived from Cree and the nominal system is dominated by French with some contributions from Cree. I have already described this split in previous sections (see for e.g. §1.2), so I will restrict my discussion to the contribution of both French and Cree to nominal inflectional morphology. Michif preserves both French plural morphology and adjectival agreement with some case-marking from Cree. For instance, the Cree obviative marker and locative suffix have been retained in Michif, albeit in a somewhat reduced manner. The obviative marker has two uses in Cree. It is used to distinguish two or more third person entities within a clause or stretch of discourse. The third person noun, which is not previously mentioned, receives the obviative marker, with the topic remaining unmarked. It also has a more structural use on the clause-level, distinguishing two animate third person arguments of a verb, or two nouns in a possessive phrase. Bakker says that this marker is present in Michif, but somewhat reduced in comparison with Cree.

This use of what we would call syntactic obviation is reduced more than in Plains Cree, in which an obviation marker is obligatory for animate nouns. With respect to French nouns in Michif, personal names are always marked for obviation ... animals sometimes ... ; and inanimate entities never. (Bakker, 1997, p. 89)

Moreover the use of the obviative marker in possessive noun phrases does not extend to French-derived nouns, but rather it is only used with a few Cree nouns. The language of the noun also determines the distribution of the locative suffix. Michif speakers use both

³¹ Light Warlpiri should also be included in this list, however given its similarity with the structure of Gurindji Kriol in terms of inflectional morphology, I will not discuss it here.

the French preposition and Cree locative suffix, however the Cree locative is only found on Cree stems. Again there are few of these in the nominal domain (Bakker, 1997, p. 110). Thus French and Cree contribute relatively equal amounts of structural material to Michif. The direction of transfer (French to Cree or vice versa) is not clear from the end result, Michif, and little socio-historical information is available to support a claim either way. Indeed Bakker suggests an adirectional model of intertwining by way of explanation, which I will not present here.

Another language, which has also retained inflectional morphology, including case marking, from both source languages is *Mednyj Aleut*. Mednyj Aleut was spoken on Mednyj Island, which lies in the Russian territory of the Bering Strait. It was first settled by Russian fur seal hunters in the early 19th century, and Aleutians were brought to the island soon after. Marriages between Russian men and Aleutian women resulted, and the subsequent population were called creoles. Thomason (1997b, p. 462 onwards) suggests that it was the creoles who created Mednyj Aleut. She assumes that they were bilingual in both languages but their half-way position in society led them to mark themselves out as a separate group. Different mechanisms have been proposed for the genesis of this language. Golovko (1994) suggests that it is the result of word games, and Thomason proposes the less consciously manipulative route of code-switching. The use of Mednyj Aleut declined in the 1940s when the Russians introduced Russian education (Thomason, 1997b). At the last report, only 10-12 Mednyj Aleut speakers remained (Golovko, 1994, p. 113). The structure of Mednyj Aleut consists of many Aleut nominal inflections, including two case distinctions, absolutive and relative, and various derivational suffixes such as agent, instrumental, location, detransitive, inchoative markers and so on. Mednyj Aleut also derives much of its finite verbal inflectional morphology from Russian, including portmanteau morphemes which express tense, number, person markers; and a negative verb prefix derived from the Russian negative particle *ne* (Thomason, 1997b, p. 457-59). Again this structural outcome does not provide clear clues about its genesis. Though it is the result of mixed marriages, whether Aleut elements were transferred to Russian or vice versa remains a point of contention.

Another contact language which exhibits mixing in the inflectional systems is *Sri Lankan Malay* (SLM). However this case is not as clear-cut as Michif or Mednyj Aleut, which both derive nominal and verbal inflections from different languages. Instead Sri Lankan Malay mixes inflectional *categories* from Tamil with the actual *forms* from Bazaar Malay in both the verbal and nominal domains³². The result, however, is similar to Michif and Mednyj Aleut, where it is not clear which language dominates the mix. A discussion about the origins and classification of SLM can be found in §1.5.1. First, the SLM TAM system marks the Tamil tense categories of past, present and future, where time reference in Bazaar Malay is unmarked and derived from context. Bazaar Malay instead distinguishes the classic creole categories of anterior tense, durative aspect and irrealis mood. Nonetheless the form and position of tense markers is derived from Bazaar Malay. In terms of position, tense markers are proclitics in SLM, where they are suffixes in Tamil. This follows the Bazaar Malay pattern of free preverbal TAM markers (Smith & Paauw, 2006, p. 163 onwards). Thus the TAM of SLM represents a convergence of Malay forms and Tamil categories. Similar results can be found in the nominal domain. SLM contains case-marking and a nominative-accusation pattern, which Smith (2003, p. 9) suggests is derived from Tamil. Sri Lankan Malay "follows the Tamil pattern exactly" with different forms of accusative markers depending on definiteness and varying according to animacy; and optional case marking in plural and singular indefinite forms (p. 8). The form of the case markers remains somewhat of a mystery, however Saldin (1996, cited in Smith, 2003) argues that they are derived from Malay forms, which is similar to the argument given for convergence between Tamil categories and Malay forms in the TAM system. Thus though Sri Lankan Malay does not derive nominal and verbal inflections from separate languages, as shown in Michif and Mednyj Aleut, it demonstrates strong influence from both languages in these domains. In this respect it represents a case of intense syntactic intertwining. The direction of language shift is not clear from the end result, however socio-historical information provides some clues. Around 1656 the Dutch brought Bazaar Malay-speaking workers from

³² Some inflectional forms such as plural marking do derive from Bazaar Malay. Though plural marking is only assigned within a maximal projection (Myers-Scotton's main distinction between early and late system morphology), these inflections strengthen the case for Sri Lankan Malay as a good case of intense syntactic mixing.

Indonesia/Malaysia to Sri Lanka. Thus this mixed language started life as a creole and the adoption of case marking and convergence in the TAM system occurred in contact with Tamil.

Both source languages also contribute to the inflectional systems of *Gurindji Kriol*. Like Sri Lankan Malay, the level of contribution is not as clear cut as Michif or Mednyji Aleut. Though inflectional morphology of Gurindji origin is clearly demonstrated in case marking, Kriol generally contributes only inflectional *categories* with actual inflectional morphology scarce. To begin with, Gurindji-derived ergative, dative, locative, allative and ablative case markers are all present in the mixed language. The example below demonstrates three of these forms: the ablative, dative and locative.

Appendix 1 gives more information about Gurindji Kriol case morphology (§A1.6.3.1) and four of these case markers and their function within particular domains are discussed in §6-§9.

- (34) *nyila-nginyi* i=m tok *nyanuny* *ngumparna-wu* na
 this-ABL 3SG.S=NF talk 3SG.DAT husband-DAT DIS

langa-ngka.

ear-LOC

"**After** that she talked **to her** husband **in** his ear."

(FHM026: TJ22yr: Dative pictures)

It is debatable whether Gurindji Kriol also contains inflectional morphology from Kriol, because Kriol contains few bound morphemes. Two verbal suffixes may be potentially classified as inflectional, the continuative and transitive markers, however the status of the transitive marker, in particular, is controversial, as is discussed in §A1.11.5.1. Tense and aspect clitics, such as =*m* (non-future) in (34), are also present. These are based on reduced forms of tense and aspect auxiliary forms, however their status is not clear, as is discussed in §A1.11.2. Nonetheless Kriol does contribute almost all verbal inflectional categories, including the tense and mood system (see §A1.12.2 and §A1.12.3), albeit as free forms. In this respect the grammatical frame of Gurindji Kriol represents a composite structure, with both source languages contributing significant structural elements to the mix. Moreover both the nominal system of Gurindji and the verbal system of Kriol

remain relatively intact, though changes in the Gurindji-derived case morphology is the focus of §6-§9. Thus it is difficult to say which language is the more dominant one, with both contributing equally weighted but different aspects of structure. In this respect, Gurindji Kriol, like the other mixed languages discussed above, behaves differently from other forms of language contact. Inflectional morphology has not disappeared in its formation, as occurs in the formation of creole languages. Moreover the intense barrage of Kriol on the Gurindji system has not resulted in the loss of case morphology, which is predicted in situations of language death. Finally Gurindji Kriol violates borrowing hierarchies and code-switching constraints such as the System Morpheme Principle, in that, regardless of which ever language is labelled the matrix language, one language has absorbed structural elements from the other language. Indeed the direction of influence is the topic of the next two chapters.

3.6 Conclusion

In conclusion the presence of Gurindji case morphology within a Kriol verbal frame in Gurindji Kriol is exceptional given the fragility of inflectional morphology in other language contact situations. For example, I demonstrated that inflectional morphology is rarely borrowed or inserted into another language's grammatical frame in code-switching, is seldom found in pidgin and creole languages, and is one of the first aspects of a language's syntax to be affected by language death or attrition. Mixed languages exhibit different results, with the most extreme cases of intertwining showing similar patterns to Gurindji Kriol. That is, the inflectional systems of both languages show resilience where they are lost in similarly intense cases of language contact.

The disappearance or maintenance of inflectional morphology is indicative of the relative strength of the interacting languages. For example the loss of inflectional morphology is one of the first signs of language death, and in this respect demonstrates the weakening of the morpho-syntactic frame of the language. In cases of borrowing and code-switching one language is more dominant, as defined by the presence of inflectional morphology. On the other hand, the maintenance of inflectional morphology from both languages in

some mixed languages suggests the relatively equal weighting given to both languages, with neither language definitively stronger. How inflectional morphology from one language is integrated into the grammatical frame of another language is the next piece of the puzzle in these extraordinary cases of intertwining.

The following chapters will discuss how Gurindji Kriol came to contain Gurindji case morphology in a Kriol verbal frame. I will present Gurindji-Kriol code-switching data from the 1970s to argue that Kriol dominated as the matrix language initially, with Gurindji case morphology later integrated through dislocated phrases.

4. CODE-SWITCHING ORIGINS: THE SOURCE OF CASE-MARKING IN GURINDJI KRIOL

4.1 Introduction

The previous chapter examined the status of inflectional morphology in a number of language contact contexts such as borrowing, code-switching, pidgin and creole languages, language death, and mixed languages. Within this context, Gurindji Kriol, with its coupling of Gurindji-derived nominal inflectional morphology and Kriol-derived verbal inflectional categories, demonstrates an extraordinary level of morpho-syntactic intertwining. The aim of this and the next chapter is to propose a pathway by which inflectional systems from both Gurindji and Kriol came to be present in the mixed language, with a particular focus on Gurindji case morphology. This chapter will step back in time and examine the patterns evident in the Gurindji-Kriol code-switching practices at Kalkaringi in the 1970s, and the influence of constraints on these patterns. The following chapter will discuss the typology of the Gurindji-Kriol code-switching and its subsequent fossilisation, within the context of the debate about whether insertional or alternational code-switching can be responsible for the origins of mixed languages.

The code-switching data for this chapter is derived from a transcribed conversation (the *Killer*³³ transcript³⁴) recorded in the 1970s by Patrick McConvell. The conversation was between six Gurindji stockmen who were butchering a cow in a bush paddock near Kalkaringi. McConvell (1988a, p. 97) calculates that approximately a third of the utterances are monolingual Gurindji, one third Kriol and the remaining third involve intra-sentential code-switching. This subset of code-switched utterances, which consists of just over 100 verbal clauses³⁵, has formed the basis of two studies including a study of social motivations for code-switching (McConvell, 1985a; 1988a) (§4.4), and a study providing empirical evidence for the link between code-switching and the origin of mixed languages (McConvell & Meakins, 2005).

Here I will re-examine this data to look for the origins of Gurindji Kriol's inflectional morphology. Based on the *Killer* transcript, three characteristics of Gurindji-Kriol code-switching emerge. Where either Gurindji or Kriol provides the morpho-syntactic frame for code-switching (i) direct objects are the most commonly switched nominal, (ii) pronouns are never switched, and, where Kriol is the matrix language, (iii) case-marked Gurindji³⁶ nominals only appear as dislocated elements (§4.3.2). I show that this pattern can be explained using the notion of *categorial congruence* which proposes that the shape of code-switching is derived from the types of grammatical in/compatibilities found between the interacting languages (Muysken, 1995; 2000; Sebba, 1998). In the case of Gurindji-Kriol code-switching, I demonstrate that the degree of typological congruence between functionally equivalent Gurindji and Kriol constituents is responsible for the observed patterns. These patterns and constraints provide clues for how inflectional morphology from both source languages came to be present in the mixed language. The presence of Kriol free forms which mark verbal inflectional categories is

³³ The name *Killer* is derived from the word *kila* which is the Kriol word for a cow bred and killed for beef (as opposed to milk).

³⁴ Unfortunately the full *Killer* transcript is no longer available to include as an appendix.

³⁵ This data sample is limited in size and other present day code-switching data between Kriol and Gurindji and other related Ngumpin languages is available, however it is not clear whether the mixed language has influenced the structures found in this code-switching. Despite the limited nature of the data, it is nonetheless the only recording which exists of a language situation prior to the formation of a mixed language.

³⁶ Kriol nominals do not receive Gurindji case-marking unless they are established borrowings.

the result of the selection of Kriol as the grammatical frame in the code-switching stage (§4.3.1). Gurindji case morphology entered through dislocated nominals, due to a lack of typological congruence between Gurindji case-marked nominals and equivalent unmarked Kriol nominals (§4.4.2). In this respect case-marked nominals were *added* rather than *inserted* because they did not participate in the predicate argument structure of the clause. They were later integrated into the clause to form the composite morpho-syntactic frame of Gurindji Kriol. The distinction between adding and inserting relates to one of the differences between insertional and alternational code-switching, which will be discussed in the following chapter.

4.2 Code-switching as a predecessor to Gurindji Kriol

First, it is a significant observation that code-switching between Gurindji and Kriol preceded the formation of the mixed language. One of the main disclaimers in the debate about a link between code-switching and mixed languages concerns the lack of *empirical evidence* to support a claim either way. While Bakker states that "we have no documentation of a transitory phase between the supposed code-switching behaviour preceding the genesis of the mixed language" (2003, p. 129), Auer suggests that claims about the transition from code-switching to mixed languages are "plausible guesses rather than empirically based" (1999, p. 324). Myers-Scotton (2002, p. 249) believes that the next step in her Matrix Language Turnover theory (see §3.5) which outlines the progress from code-switching to a mixed language is to demonstrate the process using actual data. Finally, Backus says that all of these claims "call for evidence which, to the best of my knowledge, has not been brought forward" (2000, p. 104), and later he suggests that it is doubtful whether this sort of evidence would ever be available.

It may seem plausible and theoretically possible that situations of long-standing stable language contact may bring about stable contact varieties, consisting of the grammar of one language, the former matrix language, and a content lexicon that is for a large part drawn from what was the embedded language in the CS, *but such a development has never been demonstrated, and I think it is unlikely that the world will ever witness it.* (Backus, 2003, p. 241 emphasis added)

Indeed the mixed languages which have been documented are generally 100 or more years old. Evidence, then, is a matter for the historical record in these cases, and few of these languages have a significant body of written work associated with them. However, empirical evidence for code-switching preceding a mixed language now exists for one mixed language, Gurindji Kriol. McConvell and Meakins (2005) show that code-switching not only preceded the formation of Gurindji Kriol, but that a number of structures found in the mixed language correspond with the pattern of Gurindji-Kriol code-switching.

As was suggested in §2.3.1, multilingualism in a number of traditional Aboriginal languages was a social practice of the Gurindji before colonisation, and Kriol was added to this repertoire during the cattle station era. In the mid 1970s, it appeared that inter-sentential and intra-sentential code-switching between Gurindji and Kriol/English was a very common style of communication.

In the ... Victoria River District of the Northern Territory in the period 1975-1980, I [McConvell] also found codeswitching between sentences of the traditional language and sentences of English, and insertion of phrases of one into sentences of the other, in both directions, to be the normal pattern of Aboriginal people roughly in the age range 25-55. (McConvell, 1985a, p. 96)

Resonances of the mixed language, Gurindji Kriol, can be found in the patterns of code-switching from this time. In a study of the *Killer* transcript, McConvell and Meakins (2005) find that 73% of the mixed utterances used a Kriol verbal structure, including TAM morphemes. It appears that during this period the Kriol verbal structure was already becoming dominant. Indeed now the Kriol VP forms the basis of the VP structure of the mixed language and Gurindji inflecting verbs are never found (see §A1.11). Despite the predominance of Kriol in the VP of the code-switching, Gurindji morphology, including case and derivational morphemes, was also present in the structure of the noun phrases in code-switched utterances. Code-switched utterances from the 1970s such as (35) bear a strong resemblance to the mixed language spoken today (see §A1 for a full description of Gurindji Kriol).

- (35) *kaa-rni-mpal* said orait yutubala kat-im *ngaji-rlang-kulu*.
 east-UP-ACROSS side alright 2DU cut-TRN father-DYAD-ERG
 "You two, father & son, cut it across the east (side of the cow)."

(*Killer* transcript - G-K CS)

Through these general observations of Gurindji-Kriol code-switching in the 1970s, McConvell and Meakins (2005) provide the missing empirical link for arguments about the transition between code-switching and mixed languages for at least this mixed language. More specifically, they describe the emerging dominance of the Kriol verbal structure in the code-switching and the continuing presence of Gurindji nominal morphology.

4.3 A descriptive overview of Gurindji-Kriol code-switching

This section looks more closely at the occurrence of Gurindji case-marked nominals in the *Killer* transcript. I describe the types of switches which occur in 89 mixed Gurindji-Kriol clauses of the *Killer* transcript (§4.3.2). Some of this type of switching has been described within a social motivations account (McConvell, 1985a; 1988a) (§4.4) and some insights into the distribution of switched constituents come from the perspective of structural constraints theories (DiSciullo, Muysken, & Singh, 1986; Myers-Scotton, 2002) (§4.4.1). However I take a congruence-based approach to explain the patterns present in the code-switching, and in particular, the behaviour of Gurindji case-marking (§4.4.2).

4.3.1 Identifying the matrix language

In order to determine whether a constituent has been switched, it is necessary to identify the matrix language. The matrix language provides the syntactic frame for the switched constituents. Many different empirical and theoretical techniques have been used to determine the matrix language, such as the number of morphemes provided by each language (Myers-Scotton, 1993a), the language of the verb, the language of inflectional morphology (Myers-Scotton, 2002) and the language of the inflection bearing element of the verb (Treffers-Daller, 1994). As Muysken (2000, p. 68) suggests, the attempt to

narrow down a single set of criteria that may be applied cross-linguistically has been generally met with failure, and different approaches are appropriate for different languages. I will briefly examine some of the criteria used for identifying the matrix language in order to see which approach works best for Gurindji-Kriol code-switching.

First, a basic statistical method of morpheme counting has been used by some researchers for determining the language frame for code-switching (Myers-Scotton, 1993a, p. 68). Simply, the language with the greatest number of morphemes is considered the matrix language. Myers-Scotton suggests that the count must be made over a discourse sample, not individual utterances, because the matrix language may change within an utterance (between main and dependent clauses, for example). It must exclude cultural borrowings for concepts that do not exist in one of the languages, and language typology must be taken into account. For example, portmanteau morphemes are problematic because they encode more than one grammatical category, which is an issue if the code-switching languages include an agglutinating language and a fusional language. The problem of language typology for morpheme counts is not particularly problematic for Gurindji-Kriol code-switching. Portmanteau morphemes, such as Gurindji pronominal clitics encode person, number and case (see §A1.2.1). However they do not differ significantly from Kriol free pronouns in terms of encoding. Rather the nature of the discourse sample is probably the biggest problem for identifying an overall matrix language. Though an overview of the discourse provides a general idea of language dominance, it does not account for language switches of the matrix language which can occur *within* the sample, and indeed between utterances. The matrix language is of most relevance to the utterance level because it forms the basis of a grammar of mixed constituents. Yet applying a morpheme count method to individual utterances also proves unsatisfactory because the use of Gurindji or Kriol varies between utterances. This problem is illustrated in (36) and (37) which appear in the *Killer* transcript. Based on a morpheme count, Kriol would be deemed the dominant language in the first example. The only Gurindji present is an adverbial demonstrative and a kinship term. In the second example more Gurindji morphemes present, allowing Gurindji to qualify as the matrix language.

- (36) put-im-dan *kuya* now, *Jampin.*
 put-TRN-down thus DIS SUBSECT
 "Put it down like this now Jampin." (*Killer* transcript - G-K CS)
- (37) *nyawa* na leg *pa-rra* *ngayiny-ja-rni* *nyawa* *nyila kayi-rni-yin.*
 this DIS leg hit-IMP 3SG.DAT-LOC-ONLY this that north-UP-FROM
 "Cut the leg for me from the upper north." (*Killer* transcript - G-K CS)

The identification of different matrix languages for these two examples seems to suggest that the language which acts as the morpho-syntactic frame for switching may change within a single discourse sample. This is one issue, however a simple morpheme count continues to be unsatisfactory for the identification of the matrix language. (38) illustrates another problem with this methodology. In this example, there are more Gurindji morphemes than Kriol morphemes, however the core predicate argument structure, including verb, verbal inflection and the subject pronoun is provided by Kriol.

- (38) *marntaj* ai-l hab-im *kungulu-yawung, nyuntu* *marntaj.*
 finish 1SG-FUT have-TRN blood-PROP 2SG finish
 "Righto I'll have the bloody part, you're OK (to go) [joking]."
 (*Killer* transcript - G-K CS)

If Myers-Scotton's quantitative approach to identifying the matrix language were adopted, Gurindji would be considered the matrix language in this example. Yet this analysis seems unsatisfactory given that, though fewer Kriol morphemes are present, these morphemes provide the grammatical frame for the Gurindji lexemes. Therefore I suggest that it is not really the number of language morphemes that is important, but the weighting given to each morpheme. The difference between the above examples is the language of the verb and its corresponding verbal inflectional categories such as TAM marking - Kriol for (36) and (38) and Gurindji for (37). Indeed Muysken (2000, p. 67) cites the language of the main verb as another means of determining the matrix language. This method involves examining individual utterances, rather than the whole discourse, and identifying the language of the verb system (including TAM markers) and therefore the matrix language for these utterances. This is the approach taken by McConvell and Meakins (2005) in the study which is described above (§4.2). However in Gurindji-Kriol

code-switching the verb complex consists of two parts, a Kriol main verb or Gurindji coverb which provides the semantics of the complex, and functional elements such as Kriol TAM marking or a Gurindji inflecting verb. In many cases, the main verb or coverb comes from one language, and the other language provides the functional elements. For example in (39) the language of the coverb³⁷ is Kriol *katim* (cut), but the tense and mood marking is derived from Gurindji *parrayi* (hit-IMP-1SG.O).

- (39) *niyan* **kat-im** *pa-rra-yi* *ngapu.*
 flesh **cut-TRN** **hit-IMP-1SG.O** father
 "Cut the meat for me father." (*Killer* transcript - G-K CS)

Under Muysken's analysis, it is difficult to know whether to identify Kriol or Gurindji as the matrix language because the two parts, which make up the verb complex, come from different languages. However I suggest that the structural frame is being provided by the language of verbal inflections rather than the verb itself. So, in (39), the matrix language would be identified as Gurindji. Treffers-Daller (1994), following Klavans (1983), uses this inflectional criterion to define the matrix language of an utterance. In her study of French/Dutch code-switching in Brussels, Treffers-Daller (1994, p. 204) suggests that the "inflectional bearing element of the verb ... determines the matrix language". This criterion would identify Gurindji as the matrix language in (39) due to the use of Gurindji tense and aspect inflections. It would also identify Kriol as the matrix language in (38) despite the fact that Gurindji provides most of the morphemes. This is the method I will use for identifying the matrix language.

Using verbal inflectional categories such as TAM marking as a criterion, Kriol emerges as the dominant matrix language in the *Killer* transcript. Kriol accounts for 67.75% (n=60) of the structural frames compared with 32.25% for Gurindji. Thus, though more than one language is used as the matrix language in this discourse sample, Kriol is the main language. As was noted in §4.2, McConvell and Meakins (2005) come to a similar

³⁷ Note that the form *katim* is actually treated as a main verb in Kriol, and only as a coverb when it is used in a Gurindji grammatical frame. The syntactic category of main verb and coverb are equivalent in mixing scenarios such as code-switching, borrowing and the mixed language.

conclusion based on a slightly different criterion for identifying the matrix language (73% of utterances use Kriol as the matrix language). The dominance of Kriol in the code-switching is probably a result of socio-historical factors, as was discussed in §2.5. At this time Gurindji people were broadening their associations with other Aboriginal people and non-indigenous people through the cattle stations. The *lingua franca* across the north of Australia was Kriol. It was becoming the main language of many Aboriginal people and beginning to replace traditional languages (§2.3.2). The fact that Kriol is the dominant matrix language in this code-switching may be the result of Gurindji people following the socio-linguistic trends of the 1970s.

In conclusion, by using verbal inflection as the criterion for identifying the matrix language, the first part of the question as to how both Kriol and Gurindji inflectional categories came to be marked in the mixed language is resolved. Kriol inflectional categories in the form of auxiliary verb free forms (tense and mood marking) in the mixed language originated in the increasing dominance of Kriol as the matrix language. The remaining part of the puzzle is how Gurindji inflectional morphology, specifically case-morphology, came to be present in Gurindji Kriol.

4.3.2 Gurindji case-marking in Gurindji-Kriol code-switching

In order to describe the behaviour of Gurindji nominals and case-marking in Gurindji-Kriol code-switching, the types of constituents switched with respect to the matrix language of each of the 89 clauses were identified³⁸. Note that because more than one switch may occur in a clause, more constituent switches (100) were observed than clauses (89). Word class was the main unit of analysis, however I further divided nominals according to the grammatical relation they bear in the clause in anticipation of a congruence analysis (see §4.4.2). The results are represented in Figure 16 below. The number of morphemes switched at any one time, and the physical position of the switch

³⁸ The initial work for this analysis was done by Patrick McConvell in an unpublished manuscript, however various criteria and categories have been changed or adjusted to account for the different aims of this chapter and the different matrix language criterion.

in relation to the clause were also quantified. These results can be found in Figure 17 and Figure 18.

Figure 16 Types of constituents switched

	Total Switches	Subj	DO	IO	Verb	Adjunct	Tag Q	Pronoun	Loc. Compl.	Dis. Marker
Gurindji Matrix	33	1 3%	15 45.5%	1 3%	6 18%	1 3%	1 3%	0 0%	0 0%	8 24.5%
Kriol Matrix	67	3 4.5%	33 49%	3 4.5%	2 3%	21 31.5%	1 1.5%	0 0%	1 1.5%	3 4.5%

Figure 17 Number of morphemes switched

	no. ³⁹	%
single switch	59	59
more than one morpheme	41	41

Figure 18 Physical position of the switch in relation to clause

	no.	%
internal to clause	30	30
peripheral to clause	70	70

Statistical methods were not applicable due to the small size and limited nature of the data⁴⁰. For example, imperative clauses, and therefore imperative verb forms and direct objects, are over-represented because many of the mixed utterances in the *Killer* transcript are directives to other butchers about how to cut and distribute meat. Nominals are also scarce in general because they are optional in Gurindji and Kriol. Nonetheless many patterns emerge through a simple quantitative analysis and further qualitative work. Most of the examples discussed come from clauses where Kriol is the matrix language, as

³⁹ Note that coincidentally the number of tokens is 100, and therefore the percentage and number of tokens do not differ.

⁴⁰ This type of analysis would be enhanced by the probabilistic method favoured by Sankoff and Poplack (1981) and Treffers-Daller (1994) in their studies of code-switching. This method compares actual switches with potential switch sites. However a larger and more varied corpus is needed to produce statistically significant results.

this is the dominant pattern, and parallels between this form of code-switching and the mixed language can be observed. However some utterances which use Gurindji as the matrix language are also discussed.

A number of general observations can be made before focussing on the pattern of nominal and pronominal switching. First almost all word classes including main verbs/coversbs (40) can be switched, with the notable exception of pronominals. Constituent switches which are not related to the predicate argument structure, such as Kriol discourse markers⁴¹ (41) and Gurindji locative adjuncts (42), are very common switches (43.25%). Most of the switched elements involve single switches (59%), and finally, most switched constituents occur on the periphery of the utterance (43) (70%). This general pattern of switching will be discussed in more detail in the next chapter within the context of insertional and alternational code-switching (Muysken, 2000).

(40) *wajjawajja* **skin-im** *pa-rra*.
 quickly.REDUP **skin-TRN** hit-IMP
 "Hurry up, skin it." (*Killer* transcript - G-K CS)

(41) *nyawa* **na** *ngu-rna-rla* *kiya-rni*.
 this **DIS** CAT-1SG.S-3DAT bring-PST.PERF
 "I'll take this one for him **now**." (*Killer* transcript - G-K CS)

(42) *yeah wi-l* *hab-im* *jeya* *kurlarra*.
 yeah 3PL-FUT have-TRN there **south**
 "Yeah we'll leave it there in the **south**." (*Killer* transcript - G-K CS)

(43) *wi wana* *put-im* *longa* *sheid* *karrawarra* *yala-ngka*.
 1PL.S want.to put-TRN PREP shade **east** **that-LOC**
 "We want to put it in the shade, **there in the east**." (*Killer* transcript - G-K CS)

The second general observation relates to the similarity in the proportion of particular word class switches regardless of the language of the matrix. For example, similar

⁴¹ The status of the discourse marker *na*, for example in (41), is not clear. In fact it may be analysed as a borrowing because it is more lexically-integrated than an insertion. However insertions and borrowings are difficult to distinguish formally.

numbers of direct objects are switched regardless of whether Gurindji (45.5%) or Kriol (49%) is the matrix language. Moreover the lack of pronoun switches seems to apply to both matrix languages. Switching of Gurindji case-marked nominal arguments is also uncommon in the context of both matrix languages. They are rarely replaced by Kriol equivalents in a Gurindji matrix language, and they are seldom found when Kriol is the matrix language. On the other hand, elements which are not closely associated with the predicate argument structure of the clause are switched frequently. In the case of a Gurindji matrix language, Kriol discourse markers are the most common switches after direct objects. And where a Kriol matrix is found, Gurindji locational adjuncts occur frequently. The similarity in these proportions of switched elements suggests that an interaction between the languages rather than one language placing constraints on the other language may be relevant here. §4.4.2 will explore the constraints which seem to apply to the Gurindji-Kriol code-switching.

Turning now to the more specific behaviour of Gurindji argument nominals. Direct objects account for approximately half of the switches regardless of the matrix language. As I said above, the high proportion of direct object switches is probably related to the large number of imperative clauses. Nonetheless these figures show that direct object switching is relatively unproblematic. For example, in (44) the object "pocket-knife" is inserted into a Gurindji matrix. In (45) the matrix language is also Gurindji, however "whole lot" from Kriol is inserted into this frame. (46) demonstrates the opposite with a Kriol matrix language and a Gurindji direct object insertion. Similarly, in (47), the Kriol direct object is switched with its Gurindji counterpart.

(44) *walima* **pokitnaif** *karrwa-rnana?*
 QN **pocket-knife** have-PRS.IMPER
 "Do you have **a pocket knife**?" (*Killer* transcript - G-K CS)

(45) *nyila-ma* *kat-im* *pa-rra* **holot.**
 that-DIS cut-TRN hit-IMP **whole.lot**
 "That bit, cut the **whole lot.**" (*Killer* transcript - G-K CS)

- (46) onli *kuyuwarn* ankul kat-im langa mi.
 only **bone** uncle cut-TRN PREP 1SG.O
 "Only **bone** Uncle, cut it for me." (*Killer* transcript - G-K CS)

- (47) wi neba bin bring-im *kartak-waliya*.
 1PL.S NEG PST bring-TRN **container-PAUC**
 "We didn't bring **any buckets**." (*Killer* transcript - G-K CS)

Other nominal argument switches including intransitive subjects (S), transitive subjects (A) and indirect objects (IO) are much less frequent. They only account for 6% of switches where Gurindji is the matrix language and 9% of switches within a Kriol matrix. Again, this is probably merely a product of the nature of the data. Despite the low proportion of switches, the pattern of code-switching of these nominals differs depending on whether the nominal is case-marked or not. S arguments which are not case-marked, behave differently from A and IO arguments which are case-marked ergative and dative respectively. The pattern of intransitive subjects switches follows that of the direct objects, in that they are both inserted into the predicate argument structure of the mixed clause. This type of switching is demonstrated in (48).

- (48) *wajirrk* kom along?
helicopter come along
 "Is a **helicopter** coming?" (*Killer* transcript - G-K CS)

On the other hand, case-marked Gurindji nominal arguments are only introduced into a Kriol frame as dislocated elements, that is they occur on the periphery of the utterance and are cross-referenced by a Kriol pronoun⁴². For example, in (35) (repeated here in (49) for convenience), the Gurindji transitive subject which is marked ergative appears on the left-periphery of the clause and is cross-referenced by the Kriol pronoun *yutubala* which acts as the argument. (50) shows a similar pattern with a dislocated dative-marked nominal which is the indirect object of *gibit* (give) in apposition to the PP *langa im*.

⁴² Another feature of dislocation is a separate intonation contour. Unfortunately I am unable to perform such an analysis because the sound recording is no longer available.

- (49) *kaa-rni-mpal* said orait yutubala kat-im ***ngaji-rlang-kulu.***
 east-UP-ACROSS side alright 2DU cut-TRN **father-DYAD-ERG**
 "You two, **father & son**, cut it across the east (side of the cow)."
 (*Killer* transcript - G-K CS)
- (50) gib-it langa im ***murlu-wu Malingu-wu.***
 give-TRN PREP 3SG **this-DAT NAME-DAT**
 "Give it to **this Malingu.**" (*Killer* transcript - G-K CS)

Finally no instances of switched pronouns are found in the data. If Kriol verbal inflection is used, then Kriol pronouns are also found. For example, in (51), the Kriol past tense marker *bin* is used along with the Kriol pronoun *wi* (1PL.S). The functionally equivalent Gurindji pronoun *ngu-rnalū* (CAT-1PL.S) would never be used. Interestingly, this is the pattern which is found in the mixed language. Similarly if the syntactic frame is provided by a Gurindji inflecting verb with tense and aspect morphology, it is always accompanied by the Gurindji clitic complex consisting of the catalyst and bound pronouns (for more information about this structure see §A1.2.1). Kriol pronouns are never found in these code-switched utterances. For example, (52) uses the Gurindji inflecting verb "take" which is marked as past perfect. The pronouns used are first singular nominative and third dative Gurindji pronominal clitics which are bound to the catalyst *ngu*.

- (51) **wi** bin kom-ap *ngarlaka-murlung.*
1PL.S PST come-up head-PRIV
 "We arrived without the head" (dumbly or drunkenly)
- (52) *nyawa* na ***ngu-rna-rla*** *kiya-rni.*
 this DIS **CAT-1SG.S-3DAT** take-PST.PERF
 "I took this **for him** now." (*Killer* transcript - G-K CS)

At this point it must be noted that though some of these patterns appear to be absolute, it is likely that switches involving case-marked nominals which are not dislocated but integrated into the predicate argument structure would occur in a larger corpus. Indeed variation is both expected and predicted as one feature of the language environment which drives language change (see §10.3). I discuss the integration of case-marked

nominals into the PAS of the mixed language clauses in §4.4.2. However the patterns observed here, such as the lack of pronominal switching and the presence of case morphology in only dislocated phrases is likely to be a dominant pattern even in a larger sample of Gurindji-Kriol code-switching. Indeed my analysis is upheld in other small samples of code-switching from this time. For example, in (53), the ergative-marked Gurindji nominal is dislocated and the pronoun is derived from the same language as the verb inflection, *bin*, i.e. Kriol.

- (53) *warlawurru-lu* im bin stat laik dat *ngumpit-ku*⁴³ na
eagle-ERG 3SG PST start like that Aboriginal-DAT DIS
 "It was Eagle who introduced those practices to the Aborigines."
 (McConvell & Meakins, 2005)

In conclusion, this section has described the main switching patterns found in the *Killer* transcript. Kriol was found to be the most frequent matrix language used. Switching of direct objects was common and no switching between pronouns was observed, nor between nominal arguments, regardless of the whether Gurindji or Kriol was selected as the matrix language. Where a Kriol matrix language was adopted, Gurindji case-marked nominal arguments were introduced into code-switched clause as dislocated elements. The next section will consider the motivations for the pattern of switches described in this section.

4.4 Motivations for Gurindji-Kriol code-switching patterns

As was briefly discussed in the previous chapter (§3.3), two main approaches can be found in the code-switching constraints literature - social motivations and structural constraints. Social motivation approaches suggest that each language switch performs some kind of social work. Switches are often considered to be a manifestation of identity by the speaker. McConvell (1985a; 1988a) uses this approach in an analysis of the *Killer* transcript. I follow Pfaff (1979, p. 291) and Backus (2003, p. 246) in suggesting that,

⁴³ Though this nominal is dative-marked, it can be analysed as a benefactive construction rather than a direct object because *stat* (start) is intransitive. In this respect, a cross-referencing pronoun is not expected, and does not affect my analysis in any way.

whilst social theories may offer explanations for the broader motivations of code-switching such as reasons for the practice itself and the choice of matrix language, structural constraints theories provide more information about the resultant shape of the code-switching.

Structural constraints approaches to code-switching search for explanations for the grammar of mixed clauses by examining the structures of the interacting languages and the patterns evident in the code-switching. The earliest work on structural constraints in code-switching focussed on switch points, or the juxtaposition of two elements, and whether switching is possible between them. In her study of Spanish/English code-switching of Mexican-Americans, Pfaff (1979) suggested that a switch may occur where the surface structures of the languages map onto each other (1979, p. 314). This constraint was later formalised by Poplack and Sankoff in further studies of Spanish/English code-switching (Poplack, 1980; Poplack & Meechan, 1995; Sankoff & Poplack, 1981). In this approach the linear equivalence of elements within sentential phrases such as VPs, DPs and PPs is considered the determining factor of whether switches occur or not. This approach is not applicable to this situation because one of the languages, Gurindji, has a pragmatically-based word order (§A1.2.1) and therefore it would be difficult to find constraints based on mismatches between Kriol and Gurindji word order.

In the Gurindji Kriol code-switching data, the apparent unrestrained switching of adjuncts and non-occurrence of pronominal switches suggests that switching may relate to the predicate argument structure of the mixed clause. Two constraint-based theories deal specifically with the role of argument relations in code-switching. DiSciullo, Muysken and Singh (1986) use Government and Binding theory to propose constraints based on government relations between sentential elements⁴⁴. Myers-Scotton's (Myers-Scotton, 1993a; 2000; Myers-Scotton & Jake, 2000a; 2000b) constraints are based on her theory of morpheme types, as was discussed in §3.3. These theories will be examined below. I

⁴⁴ The more recent formal approach to code-switching using Minimalism is not considered here (McSwan, 1999), and is considered problematic for reasons similar to many constraints-based theories in making absolute rather than probabilistic statements about constraints.

show that these theories provide some explanation for the pattern of code-switching found, however they do not explain why argument nominals behave differently - that is why direct object switches involving unmarked nominals are apparently unproblematic where switches of case-marked transitive subjects and indirect objects are not found. I use Muysken (1995) and Sebba's (1998) typological account of code-switching to suggest that Gurindji-Kriol switching may be the result of categorial mismatches between the interacting languages.

4.4.1 Argument structure and constraints on code-switching

In the *Killer* transcript, the difficulty of switching pronouns and the ease of inserting adjuncts and discourse markers suggests that the pattern of code-switching may be related to the level of involvement of the switched constituent in the argument structure of the verb. Where pronouns are arguments, which is almost always the case, they are tightly bound up in the subcategorisation frame of verbs. Adjuncts are very different constituents, as they do not relate to the predicate argument structure of a clause. The influence of argument structure in code-switching patterns has been the basis of a major constraints-based theory of code-switching: Government constraints (DiSciullo, Muysken, & Singh, 1986). DiSciullo, Muysken and Singh (1986) apply Chomsky's 1981 version of the principle of government to code-switching data. Switching is deemed possible if elements are not related by government (p. 6), which they define in terms of c-command:

X governs Y if the first node dominating X also dominates Y, where X is a major category N, V, A, P and no maximal boundary intervenes between X and Y.

According to DiSciullo et al, major categories assign language indices to the nodes dominating them and their immediate constituents. This idea is based on a traditional assumption underlying X-bar theory that constituents inherit properties from their head. Thus switches between governors and their complements are not possible. For example, information about the number of objects in VP is derived from properties of the verb. DiSciullo et al assume the same for language, i.e. the same mechanism determines the

language of a constituent. Thus they predict that the language of internal arguments such as objects and indirect objects are constrained by the language of the verb. Switches cannot occur between verbs and their internal arguments. Other switches, which are ruled out, are switches between prepositions and their NP complements, and adjectival complements of noun governors (p. 8-9).

DiSciullo's government approach has been challenged by a myriad of counter examples. For example, switching between verbs and objects is found to be common in Moroccan Dutch/Arabic code-switching (Nortier, 1990) and instances of switching between prepositions and their NP complements in Hindi/English code-switching data has also been observed (Paudit, 1990, p. 45). Similarly in Gurindji-Kriol code-switching, switches between verbs and direct objects are extremely common and apparently unrestricted. Muysken (1990) also identified a couple of problems with DiSciullo et al's theory. First, some definitions of governors include functional categories such as inflections and complementisers, not just lexical governors such as nouns, verbs and prepositions. Including functional categories in the government constraint would rule out widely attested switches between, for example INFL and the subject. Secondly, the domain of government was considered too far-reaching, as it included the whole of the maximal projection. This definition would essentially rule out other commonly attested switches, between, for instance, verbs and adverbs, or determiners and nouns. The government constraint was adjusted accordingly, with L-marking defined as a more restricted form of lexical government by a non-function word under thematic marking such as verbs and nouns (1990, p. 187). Even with these adjustments, Muysken (1995, p. 187) considers the government constraint too strong.

Apart from the prevalence of direct object switches, there are structural reasons why a dominance-based approach may not be directly applicable to Gurindji-Kriol code-switching. It is not clear whether languages such as Warlpiri (and by extension, Gurindji) have constituents which are hierarchically related through a VP structure. For example, Hale (1983) suggests that these languages have a flat structure, though other accounts of Warlpiri posit a VP structure (Jelinek, 1984). Simpson (1991) and Austin and Bresnan

(1996) also construct hierarchical relations between some constituents, though no VP structure. Regardless of whether Gurindji has a VP structure, the predicate argument structure may still affect the ability of certain constituents to switch. For example, switching based on argument relations was observed in French-Dutch code-switching in Brussels. Treffers-Daller (1994, p. 226) noted that "constituents that are arguments of a verb or preposition are less easily switched than constituents that are not arguments". Again, however, the overwhelming presence of switched direct objects provides the clearest problem for a similar analysis of the Gurindji-Kriol data. Regardless of the matrix language, the direct object may be derived from the other language.

This argument-based theory of code-switching may be saved if the status of Gurindji direct objects as arguments is questioned. Nominals in non-configurational languages, such as Gurindji, are argued to have the status of adjuncts rather than arguments in the generative literature (Jelinek, 1984; Laughren, 1988; 1989; Speas, 1990). Bound pronouns are considered the true arguments in a clause (Jelinek, 1984)⁴⁵. A number of properties of these languages provide evidence for this argument - pragmatically determined word order, discontinuous noun phrases, and the common omission of nominals coupled with the virtual compulsory presence of bound pronouns⁴⁶. This account of arguments and adjuncts may provide some insight into Gurindji-Kriol code-switching. As was shown in (51) and (52), pronouns are never switched. On the other hand, direct objects are the most common type of insertion, as seen in (44)-(47). If pronouns are considered the true arguments and nominal adjuncts are freely switched, this evidence would suggest that a constraints-based theory of Gurindji-Kriol code-switching based on argument structure may be a reasonable approach. However if this were the case, it is surprising to find that other Gurindji nominals such as transitive subjects and indirect objects are only found in dislocated structures, as was seen in examples (49) and (50). This theory suggests that these nominals are already adjuncts, which does not explain why they behave differently from direct objects, which are also

⁴⁵ Note that several arguments against this approach have come from the LFG literature (Austin & Bresnan, 1996; Nordlinger, 1998b; Simpson, 1991).

⁴⁶ Note that one language which has also been brought into this broader discussion, Jiwari, does not contain bound pronouns (Austin & Bresnan, 1996). However the languages I am discussing here, Gurindji and Warlpiri do contain bound pronouns.

adjuncts in this account. If all nominals were adjuncts, then the only difference which might be predicted would be between nominal adjuncts and pronominal arguments. Instead, I suggest that the difference is that A and IO nominals are case-marked and this apparent restriction on switching suggests that it may be case-marking that is problematic rather than argument structure.

Myers-Scotton's Matrix Language Frame (MLF) model of code-switching is particularly interested in the behaviour of inflectional morphology in the context of language mixing. Like DiSciullo's model of code-switching, Myers-Scotton's MLF model is also constraints-based, however her constraints apply to a morphological rather than syntactic level. Myers-Scotton's model classifies morphemes according to her own 4-M model. As was shown in §3.3, morphemes are divided into *content* and *system* morphemes with system morphemes further divided into *early* and *late* system morphemes. Late system morphemes are of two types: *bridge* and *outsider* morphemes. I will use the following example to reiterate Myers-Scotton's classification of morphemes, before demonstrating how Myers-Scotton's code-switching constraints relate to this morpheme classification.

- (54) *kaa-rni-mpal* said orait yutubala kat-im ***ngaji-rlang-kulu***.
 east-UP-ACROSS side alright 2DU cut-TRN **father-DYAD-ERG**
 "You two, **father & son**, cut it across the east (side of the cow)."
 (*Killer* transcript - G-K CS)

Content morphemes participate in the thematic grid of the utterance. They assign or receive thematic roles, where system morphemes do not (1993b, pp. 98-99). In (54), *yutubala* (2DU) would be considered a content morpheme because it is an argument of a transitive verb. Likewise, the Kriol inflecting verb, *katim* (cut) is a content morpheme because it assigns two theta roles. On the other hand, the ergative marker *-kulu* is an example of a *system* morpheme due to its functional nature in marking grammatical relations (Myers-Scotton, 2003, pp. 77-79; Myers-Scotton & Jake, 2000a; 2000b, pp. 1061-66). The first type of system morpheme, the *early* system morpheme, does not assign or receive a thematic role, however it patterns with the content, adding extra meaning to the head of a phrase. Early system morphemes also depend on the head (a

content morpheme) of their maximal projection for their syntactic role (Myers-Scotton & Jake, 2000a, p. 1063). In the example above, the derivational morpheme *-rlang* (DYAD) is an instance of an early system morpheme. It is structurally assigned within the NP, though it does not take a theta role, and adds extra meaning to the head *ngaji* (father) to include his son. On the other hand, *late* system morphemes do not convey conceptual information, rather grammatical information is contained in these morphemes. They are structurally assigned outside of their maximal projections to indicate relations between elements in the CP rather than lower level phrases⁴⁷. There are two different types of late system morphemes: *bridge* system morphemes and *outsider* system morphemes. The difference between these two morphemes lies in where they receive their assignment. Bridge system morphemes depend on information from *within* their maximal projection, whereas outsider system morphemes rely on a source *outside* of their immediate maximal projection (Myers-Scotton, 2003, pp 78-79). The Kriol transitive marker *-im* in the example above could be analysed as a bridge morpheme. Although it marks transitivity, it contains no conceptual information of its own and finds its assignment within the VP. *Outsider* system morphemes include affixes indicating subject-verb agreement (AGR), and case morphology⁴⁸ (Myers-Scotton & Jake, 2000a, 1065-66). So for instance, the ergative case in the example above may be considered a late system outsider morpheme because it depends on the verb for its assignment.

With the theoretical machinery of the 4-M model, Myers-Scotton posits four constraints on code-switching: Morpheme Order Principle, System Morpheme Principle, ML Blocking Hypothesis, EL Island Trigger Hypothesis. Most relevant to this discussion is the System Morpheme Principle and EL Island Trigger Hypothesis⁴⁹.

⁴⁷ The distinction between content and system morphemes seems to amount to a difference between content and function words. Similarly the definitions of early and late system morphemes appear to follow the classification of inflectional and derivational morphology. Myers-Scotton (2002, p. 69 onwards) argues against the use of these more well-known categories in favour of her model in some detail. It is not my purpose here to argue the intricacies of Myers-Scotton's 4M-Model, but to assess its applicability to the Gurindji Kriol code-switching data.

⁴⁸ Note that the categorisation of case morphology as a late system morpheme is problematic in Gurindji given that all elements of the NP must agree for case. This agreement occurs within the immediate maximal projection which fits better with the definition of bridge system morphemes.

⁴⁹ The *Morpheme Order Principle* is largely reliant on the surface order of morphemes and in this respect is of little relevance to code-switching situations where one or both of the participating languages is non-

The *System Morpheme Principle* predicts that, where code-switching occurs between two languages, inflectional morphology from the embedded language will not be found⁵⁰. In fact, this occurs in Gurindji-Kriol code-switching. Where Kriol is the matrix language, inflectional morphology from Gurindji is present in the form of case morphology. An explanation for the presence of Gurindji case morphology in a Kriol matrix may be derived from the *EL Island Trigger Hypothesis*. This hypothesis was proposed in response to violations of the System Morpheme Principle. EL islands consist of sequences of morphemes which come from the embedded language, and are well formed according to the rules of this language (Myers-Scotton, 1993a, p. 137). In a sense, the EL Island Trigger Hypothesis seems like an escape hatch for the MLF model. Essentially the hypothesis could be used to explain away any EL sequences. However Myers-Scotton does place some limitations on the occurrence and distribution of EL islands. She (1993a, p. 144) posits an implicational hierarchy of switches. This hierarchy is similar to Muysken's (2000, c.f. Treffers-Daller 1994) typology of alternational code-switching, which will be discussed in §5.2.1. It favours elements peripheral to the theta grid of the utterance and idiomatic expressions:

1. Formulaic expressions and idioms (especially time and manner PPs but also as VP complements)
2. Other time and manner expressions (NP/PP adjuncts used adverbially)
3. Quantifier expressions (APs and NPs especially as VP complements)
4. Non-quantifier, non-time NPs as VP complements (NPs, APs, CPs)
5. Agent NPs
6. Thematic role- and case-assigners, i.e. main finite verbs (with full inflections)

configurational, which is the case with Gurindji. Sankoff and Poplack's linear congruence principle was not considered for similar reasons (see the beginning of this section). The *ML Blocking Hypothesis* relates to content morphemes from the less dominant language which is also less relevant for a discussion of inflectional morphology.

⁵⁰ In situation of double marking where the embedded language functional equivalent is also found Myers-Scotton suggests that it is not functionally active. Indeed she considers them a type of production error. (1993a, p. 98).

Gurindji case-marked nominals are only present as dislocated nominals in a Kriol matrix. These dislocated elements only have a peripheral relationship to the predicate argument structure and therefore may be considered EL islands. Indeed this type of structure will be discussed in the following chapter. However, whilst the EL Island Trigger Hypothesis provides part of the picture for the presence of these NPs, it is still not clear why they are blocked from argument positions in the first place. Indeed Myers-Scotton (1993a, p. 143) recognises this type of predictive flaw, saying that "while their [EL] structure can be predicted, *when* such a constituent will be produced cannot be predicted". It may be suggested that the System Morpheme Principle blocks the use of these nominals in the argument position due to their case-marking, however it must be noted that, if Gurindji Kriol can be regarded as the outcome of conventionalised code-switching, then at some point case-marked nominals ceased being just EL islands and also began acting as arguments. In the mixed language, Gurindji Kriol, case-marked nominals are not always dislocated, but occupy argument positions, as is demonstrated in (55) and (56) where the case-marked nominals are not accompanied by an argument pronoun. The potential for this historical development will be discussed more in the next section.

- (55) *karnti-ngku* *turrrp* im fut-*ta* *lungkarra-k.* (GK)
tree-ERG poke 3SG.O foot-LOC cry-INCHO
 "The **stick** went through his foot, and made him cry."
 (FM045.D: CE25yr: Bird story)

- (56) *jirri-bala* *malyju* *dei* *gon* *warlakap* *jurlaka-yu.* (GK)
 three-NMZ boy 3PL.S go look.around **bird-DAT**
 "The three boys, they go looking around **for birds.**"
 (FM011.A: ER26yr: Bird story)

4.4.2 Gurindji-Kriol code-switching and categorial congruence

In a sense, my attempts to apply DiSciullo et al and Myers-Scotton's code-switching theories to the Gurindji-Kriol code-switching data keep returning to the same issue - the difference in behaviour of Gurindji case-marked nominals versus Gurindji nominals which do not require overt case-marking. Related to this issue is the compatibility of transitive subjects and indirect objects, which require case-marking in Gurindji, but not in

Kriol. The notion of *congruence* may provide some clues as to why Gurindji direct objects are easily admitted into a Kriol matrix language, where case-marked nominals only appear as dislocated elements. In this context, congruence may be thought of as the structural and typological compatibility or match of functionally equivalent elements from interacting languages.

The importance of congruence has been recognised in different ways in the constraints-based theories of code-switching. Word order, and the linear equivalence of two interacting languages play a role in Poplack and Sankoff's Equivalence Constraint and Myers-Scotton's Morpheme Order Principle. Muysken (2000, p. 25) suggests that congruence between switched elements often "undoes" the effect of DiSciullo et al's government-based constraints. For example the prevalence of object switches in many languages should be blocked under DiSciullo et al's proposal. However they are permitted when the interacting languages have corresponding object categories.

Though categorial congruence has played a role in a number of theories of code-switching, Sebba (1998, p. 8) goes further suggesting that categorial congruence is in fact the basis for an overarching principle of a syntax of code-switching:

An element of language L_1 (morpheme, word or phrase) may be replaced by a congruent element from the other language, L_2 if one exists.

Sebba broadens the possible effect of categorial congruence on code-switching in two ways - (i) he adds any and all syntactic, morphological, semantic and phonological features to the list of potential equivalent structures, and (ii) he suggests that code-switched utterances are not merely the result of constraints, but rather recognised equivalences between languages can have the opposite effect by admitting different structures.

First, Sebba proposes that any feature of language can potentially alter the shape of the language mix if speakers recognise the congruence or lack there of between categories in the interacting languages. In this respect, Sebba does not consider congruence to be an

absolute feature of languages. It is only meaningful relative to the language context, which includes the languages, speakers and community norms.

The locus of congruence is the mind of the speaker, but community norms determine, by and large, the behaviour of individual speakers. Bilinguals 'create' congruence categories by finding common ground between the languages concerned. (Sebba, 1998, p. 7-8)

Sebba (1998, p. 9) takes the idea that congruent categories are relative further. He suggests that, because categorial congruence is "constructed" within a bilingual community of speakers, changes in the perception of congruence may occur over time. Certain categories may be deemed congruent for the purposes of code-switching where they were not perceived as equivalent at an earlier date. This idea may help explain why case-marked nominals can be part of the predicate argument structure in Gurindji Kriol, but not in the code-switching stage, as was discussed in the previous section. It may be the case that the perception of congruence may change over time as speakers' abilities in the interacting languages change. In the case of Gurindji Kriol speakers, their knowledge of Gurindji has declined over time with most people under the age of 35 years, only having a passive knowledge of Gurindji (§2.2.1). Thus the perception of categorial congruence may have changed with the degree of knowledge of the input languages.

The perception of congruence between particular categories across languages can have one of four effects on code-switching: blocking, harmonisation, neutralisation, and compromise. Two of these effects are relevant to Gurindji-Kriol code-switching. First, the notion of *blocking* is essentially based on the same idea as the constraints outlined in the previous section, where switches are limited by structural features of the interacting languages (Sebba, 1998, p. 13). However here constraints arise from a perceived structural incompatibility between the code-switching languages. For example, where there is a lack of typological compatibility between bound pronominal clitics and free pronouns, code-switching involving pronouns is rarely found (Muysken, 2000, p. 57). Indeed the lack of congruence between Kriol pronouns and Gurindji equivalents may have also contributed to the lack of switching between these elements. Typologically,

Gurindji pronouns are pronominal clitics which require a host, either a catalyst or an imperative inflecting verb (see §A1.2.1). On the other hand, Kriol pronouns are free forms which are constrained in an SVO word order relationship with the verb (see §A1.2.2).

On the other hand, categorial congruence may promote code-switching if speakers treat categories in different languages as the same. *Harmonisation*, as Sebba (1998, p. 9) calls this effect of code-switching, may provide some explanation for the ease of switching between Gurindji and Kriol direct objects and, by extension, the more constrained nature of switching between other nominals. Kriol and Gurindji direct objects represent the best typological match of the nominals as they are unmarked for case. Thus switches of direct objects occur more often because Gurindji and Kriol direct objects match in terms of word class and overt case-marking (or lack thereof). On the other hand Gurindji transitive subjects and indirect objects differ from Kriol nominals in terms of case-marking. Kriol nominals are not inflected for case, with argument relations marked by word order and prepositions. Kriol transitive subjects and indirect objects do not require case-marking where Gurindji nominals do. In this respect there is a clash in the categories which blocks the language switch.

4.5 Conclusion

The notion of categorial congruence allows a characterisation of Gurindji-Kriol code-switching which relies on one principle. Theories based on argument structure provide some explanation for the character of Gurindji-Kriol code-switching. It is certainly the case that many switched constituents are introduced external to the predicate argument structure of the matrix language. As was discussed earlier, Treffers-Daller (1994) observed similar patterns in the Dutch-French code-switching in Brussels, and Myers-Scotton calls these EL islands. This kind of patterning will become relevant in the following chapter in a discussion of alternational code-switching. However these theories do not explain why some constituents, such as Gurindji case-marked nominals, are not found participating in the matrix clause in the *Killer* transcript. If argument structure

constrains argument switches, then direct object and intransitive subject switches should be restricted in the same manner as transitive subject and indirect object switches. On the other hand, categorical congruence provides an explanation as to why DO switches are unproblematic, and A and IO switches are only introduced into the code-switched utterances as dislocated NPs. By extension it should be the case that S switches should also be unconstrained because the S nominal in Gurindji, like the DO nominal, is not overtly marked for case. Indeed the two examples of a switched Gurindji S nominal which appear in the *Killer* transcript, for example (48), are not dislocated, but switch with Kriol arguments. The dearth of S examples is a result of the nature of the *Killer* transcript, which, as I stated in §4.3, contains many imperative clauses. It is predicted however that in a data set which contains a richer array of clause structures, many more examples of switched S arguments will be present, and demonstrably unproblematic.

The next chapter discusses how this pattern has developed in the mixed language. I will look more broadly at the typology of Gurindji-Kriol code-switching within Muysken's (2000) typological framework of code-switching. Though insertions are not uncommon, I will suggest that Gurindji Kriol code-switching shows strong alternational patterns, as described by Muysken (2000). The notion of alternational switching as a precursor to mixed language genesis is somewhat contentious, however, and has been explicitly rejected by Backus (2003). However alternational code-switching is characterised, in part, by the type of switching discussed in this chapter where switched elements do not participate in the argument structure of the matrix language. Gurindji-Kriol code-switching also shows other typical alternational patterns such as clause-peripheral switches, switches of a string of constituents and switches of syntactically unintegrated elements such as discourse markers. This type of switching suggests that the grammars of both languages involved in the switching are active.

5. THE TRANSITION FROM CODE-SWITCHING TO A MIXED LANGUAGE

5.1 Introduction

The extent to which code-switching is a factor in the formation and resulting structure of mixed languages is debated extensively. Bakker (2003, p. 129) is the strongest critic of the code-switching approaches suggesting that they play no role in mixed language genesis, and that typological resemblances between mixed languages and code-switching are the product of selective comparison on the part of researchers. However, building on the work of McConvell and Meakins (2005), the evidence presented in the previous chapter demonstrates that code-switching probably contributed to the formation of at least one mixed language, Gurindji Kriol. Indeed a growing body of work supports the contribution of code-switching to mixed languages (Auer, 1999; Backus, 2003; Gardner-Chloros, 2000; Myers-Scotton, 1993a). Within this literature, there are two main approaches. The first considers the different structures of mixed languages and compares them directly to different types of code-switching, such as insertional and alternational code-switching (Backus, 2003). The second approach is more explanatory, proposing a transitory stage between code-switching and a mixed language. This approach utilises structural constraint theories of code-switching to better understand the resultant character of mixed languages (Auer, 1999; Myers-Scotton, 2003).

In the previous chapter, I demonstrated the importance of code-switching to the presence of case-marked nominals in Gurindji Kriol. This chapter ends the section of this thesis on the development of case-marking in Gurindji Kriol. It continues to focus on these nominals, but also takes a broader view of Gurindji-Kriol code-switching in order to map the transition to the mixed language. I begin by defining alternational and insertional code-switching in terms of Muysken's (1997a; 2000) typology of intra-sentential language mixing, and describe (i) Gurindji-Kriol code-switching (§5.2.1) and (ii) the mixed language (§5.2.3) within this framework. I show that insertional and alternational patterns are present in both forms of language mixing. This characterisation of Gurindji-Kriol code-switching and the mixed language is contrary to predictions made in the mixed language literature. Here insertional code-switching is favoured as a predecessor for mixed language genesis because a closer typological match has been observed between this form of code-switching and the mixed languages studied (Backus, 2003; Bakker, 2003).

The differences in the patterns between the code-switching and mixed language also suggest that Gurindji Kriol is not simply a fossilised form of code-switching but the result of several stages of change (§5.2.2). Two models take a more transitional approach to this issue, outlining the progressive grammaticalisation of code-switching into a mixed language (Auer, 1999; Myers-Scotton, 2003) (§5.3). Some Gurindji Kriol data from the 1980s will be used to discuss this transitory phase (Dalton et al., 1995). These models assume that insertional code-switching leads to mixed language genesis because its associated structural constraints are responsible for the narrowing of variation in structures. Alternational code-switching is considered to be motivated by discourse factors and therefore deemed too unpredictable to stabilise (Backus, 2003) (§5.4). However I continue the discussion of congruence-based constraints from the previous chapter to suggest that alternational code-switching can also be viewed in terms of structural constraints and can therefore play a role in shaping a mixed language. In the case of Gurindji Kriol, I show that alternational code-switching is ultimately responsible for the presence of Gurindji case-marked arguments in Gurindji Kriol.

5.2 The typology of code-switching and mixed languages

One of the main approaches to correlating mixed languages with prior code-switching practices is to search for resonances of code-switching structures in mixed languages. This was the essence of the McConvell and Meakins (2005) study of Gurindji Kriol, and indeed the previous chapter. A distinction which is considered significant for this type of study is Muysken's (2000) typological differentiation of *insertional* and *alternational* code-switching. Generally speaking, these two types of code-switching can be distinguished by the level of involvement of the grammars of the interacting languages. Alternational code-switching involves the alternation of structures from different languages. On the other hand, the grammar of one language is more dominant in insertional code-switching, with elements from another language inserting into the dominant language's structure (Muysken, 2000, p. 3).

A number of recent studies have examined the typological similarities between insertional and alternational code-switching, and the structure of mixed languages (Backus, 2003; Bakker, 2003; Mous, 2003b). Insertional code-switching is generally considered the greatest influence on mixed language genesis in these comparisons, because the mixed languages studied generally do not resemble a fossilised form of alternational code-switching, whereas they look remarkably like insertional code-switching. I claim it is most likely that Gurindji Kriol found its current shape in both forms of code-switching. I use Gurindji Kriol data and Gurindji-Kriol code-switching data from the *Killer* transcript to exemplify these arguments. Only examples of code-switching where Kriol is the matrix language will be used, as this is the dominant pattern (see §4.3.1) and relates directly to the development of the mixed language.

5.2.1 Insertional and alternational strategies in Gurindji-Kriol code-switching

As was stated above, *insertional* code-switching involves inserting elements from one language into another language's structure. Only one grammar is active in this sense, though a certain level of interaction between the grammars is required in order to find suitable insertion points, as is discussed in the constraints literature (§4.4.1-§4.4.2).

Insertional code-switching tends to be characterised by a nested ABA pattern (Muysken, 2000, p. 63). This means that the segments on either side of the inserted constituent are grammatically related and are derived from the same language. These types of nested structures make up 30% of the Gurindji-Kriol code-switching data, as was shown in Figure 3 §4.3.2. (57) is one such example where the language of the main verb is Gurindji however it is preceded and followed by Kriol elements.

- (57) wi garra *tarukap* na.
 1PL.S FUT **bathe** DIS
 "We'll go and **wash off** now." (*Killer* transcript - G-K CS)

Related to this nested pattern is another feature of insertional code-switching - insertions are generally single constituents, though several types of constituents are possible. For example, in the case of nominal constituents the actual noun may be switched, or the noun phrase (including its complements), or the noun phrase with elements which relate it beyond the NP (including gender and number agreement), or indeed the whole DP (Muysken, 2000, p. 61). In the *Killer* transcript, 59% of switches involve single constituents, as was shown in Figure 2 §4.3.2. Main verbs (57) and direct objects (58) are the most commonly inserted single constituents, demonstrated in Figure 1 §4.3.2. These constituents may include more than one morpheme such as (59) where a direct object including a modifying demonstrative is inserted.

- (58) wi bin bring-im *mangarri*.
 3PL.S PST bring-TRN **bread**
 "We brought **bread**." (*Killer* transcript - G-K CS)

- (59) yubala nomo laik-im *nyawa* *kampun*.
 2PL NEG like-TRN **this** **vein**
 "Don't you lot like **this vein** then?" (*Killer* transcript - G-K CS)

These single constituent insertions tend to be *content* words, such as nouns, verbs and adjectives rather than *function* words, though function words are not excluded (Muysken, 2000, p. 63). This feature relates to the borrowing hierarchies discussed in §3.2.1, where there is a tendency for content words to be borrowed before function words. However the analysis presented in the borrowing hierarchies is more implicational than Muysken's observation of insertional patterns in code-switching, i.e., in cases of borrowing, function words are potentially borrowable, but only if content words have already been borrowed (content words > function words). The same could be said of insertions. Function words will only be inserted if content words are already generally present in the code-switching. For example, in the following utterance, the only inserted element in the Kriol frame is a Gurindji dative morpheme which creates a benefactive construction. In general, though, content words make up the bulk of single switches, as shown in Figure 1 §4.3.2.

- (60) jikinfaul-*u* dei wand-im nekbif.
 chicken.fowl-DAT 3PL.S want-TRN neck.meat
 "They want the neck meat **for** the chickens." (*Killer* transcript - G-K CS)

Although insertional strategies are found in Gurindji-Kriol code-switching, alternations are also very common. Alternational code-switching is a form of mixing where the languages remain reasonably separate (Muysken, 2000, p. 96)⁵¹. In creating a typology of alternational code-switching, Muysken draws on the work of Treffers-Daller (1994) who studied French/Dutch code-switching in Brussels. Muysken defines most of the code-switching strategies, that Treffers-Daller discusses, as alternational, i.e. switches which are more likely to occur between coordinated, dislocated and adverbial NPs and PPs (Treffers-Daller, 1994, p. 226). Muysken (2000, p. 100) frames this hierarchy in terms of *peripherality*. He suggests that switched elements which are more marginal to the argument structure of the matrix language are cases of alternations. These strategies are

⁵¹ Myers-Scotton's concept of Embedded Language Islands is very similar to Muysken's alternational code-switching. EL Islands are discussed in §4.4.1.

also quite strong in the Gurindji-Kriol code-switching of the 1970s. Switches of syntactically unintegrated parts of the grammar constitute 43.25% of all switches, as was shown in Figure 1 §4.3.2. For example, a form of peripheral switching is left/right dislocation where the dislocated element is co-referenced with a pronoun in the clause as a topicalisation strategy, as in (50). These alternations involving dislocated nominals were described in detail in the previous chapter. Other common switches involve adverbial demonstratives (62), locational adjuncts (63), and discourse markers (64).

- (61) gib-it langa im *murlu-wu Malingu-wu.*
 give-TRN PREP 3SG **this-DAT** NAME-DAT
 "Give it to this **to Malingu.**" (*Killer* transcript - G-K CS)
- (62) put-im-dan *kuya* na, *Jampin.*
 put-TRN-down **thus** DIS SUBSECT
 "Put it down **like this,** Jampin." (*Killer* transcript - G-K CS)
- (63) *kurla-rni-rra* na kat-im *kankula.*
south-up-ALL DIS cut-TRN **up**
 "Cut it **up to the south** (of the carcass)." (*Killer* transcript - G-K CS)
- (64) *wartayi,* what's the matter det man i nomo garram
goodness what's the matter the man 3SG.S NEG have

langa?!
 ears
 "**Goodness,** what's the matter with that man, is he stupid?!"
 (*Killer* transcript - G-K CS)

Peripherality can also be thought of in terms of the structural position of switches. Muysken (2000, p. 100) suggests alternational code-switching can be characterised by constituents which are switched on the physical edge of a matrix clause rather than within the clause. This is a dominant pattern in Gurindji-Kriol code-switching with these types of switches accounting for 70% of all switching (Figure 3 §4.3.2). This feature often goes hand-in-hand with the relationship of the switched element to the predicate argument structure of the matrix clause. Constituents which are peripheral to the argument structure of the clause often occur at clause boundaries in this data. (63) above is an example of a

Kriol matrix clause with two Gurindji locational adjuncts switched on the right and left periphery of the clause. And, by definition, dislocated NPs are found on the margins of clauses, as was shown in (50).

Muysken (2000, p. 97) also suggests that another feature of alternational switching is that more than one constituent is involved in a switch. As was observed above, large numbers of single constituent switches (59%) are present in the Gurindji Kriol data. However multiple switches (41%) also occur (Figure 2 §4.3.2). Whether switched constituents occur singly or in conjunction with other elements also seems to correlate to their position in the clause. For instance, single constituent switches tend to be embedded in the clause, and involve direct objects, such as (65). Multiple constituent switches occur more often on the periphery of the clause, as in (66) and (38), where (66) involves an adverbial and directional nominal and (38), a direct object, and a right-dislocation.

(65) kat-im *nyawa* na lidlbit
 cut-TRN **this** DIS little.bit
 "Cut it, **this one** now, a little bit." (*Killer* transcript - G-K CS)

(66) pul-im *jirrimarna kankurla-k.*
 pull-TRN **hard** **up-ALL**
 "Pull it **up here hard**." (*Killer* transcript - G-K CS)

(67) *mali,* wi garram *mangarri marntaj,* *jarrwa* *mangarri.*
 son-in-law 1PL.S have **bread** **OK** **lots** **bread**
 "Hey son-in-law we have **bread OK, heaps of bread**."
 (*Killer* transcript - G-K CS)

To sum up, both alternational and insertional code-switching strategies can be found in the Gurindji-Kriol code-switching data. Due to the limited nature of the data (see §4.3.2), it is not clear whether either strategy dominates. For example, direct object switches in imperative clauses are probably common due to the nature of the discourse which is dominated by directives about how to cut and distribute meat. A much larger data sample would be required to employ probabilistic methods (see for e.g. Sankoff & Poplack,

1981) which would be more revealing. Nonetheless, as the next section will demonstrate, the relative proportions of data are less important than the structure of the actual switches which allows one to draw conclusions about their possible effect on the structure of the resultant mixed language.

5.2.2 Typological comparisons between code-switching and mixed languages

Insertional code-switching is generally considered the strongest contender as a forerunner for mixed languages because it is claimed that most mixed languages resemble this form of code-switching. However, contrary to this claim, Gurindji Kriol contains strong alternational patterns. The potential role that alternational code-switching plays in mixed language genesis is examined in this section.

Backus (2003) explores the possibility of alternational code-switching fossilising into a mixed language in a comparison of Turkish-Dutch language mixing in the Netherlands with two mixed languages: Michif and Media Lengua. He examines this question from different angles, including the predictability of alternational switches and the typological similarity between these different forms of language contact. I will explore the issue of predictability in §5.4. With regard to the question of typological similarity, Backus looks closely at Turkish-Dutch language mixing which he calls a "mixed lect" and compares it with Michif and Media Lengua. This mixed lect is a relatively conventionalised form of code-switching which, like Gurindji Kriol, contains both alternational and insertional patterns. Michif is a V-N mixed language which exhibits a split between a Cree VP system and a French NP system, and Media Lengua is an L-G mixed language which derives its lexicon from Spanish and its grammar from Quechua⁵². Backus finds that the Turkish-Dutch mixed lect contains many alternations between Dutch and Turkish, which are not comparable to the structures of Michif and Media Lengua. He (2003, p. 265) suggests that these mixed languages assign their grammar and lexicon to the different languages, whereas alternational code-switching contains phrases where one language

⁵² For a fuller description of Michif and Media Lengua see §2.6 and §3.6.

provides both the lexicon and grammar⁵³. This mismatch between alternational code-switching and mixed language structures leads him to conclude:

(F)ossilisation of the present state of Turkish-Dutch CS would lead to a language quite unlike a Mixed Language, on at least two counts. There would be much alternational CS between the two source languages ... and there would be a lot of retained Turkish lexical material. If Turkish-Dutch CS were more like, for example Michif, there would be no alternational CS, and much of the Turkish lexicon would have disappeared. (Backus, 2003, p. 238, where CS=code-switching)

Backus (2003, p. 239) concludes that mixed languages resemble insertional code-switching more strongly than alternational code-switching. However, one of the main problems with Backus' comparison of Turkish-Dutch code-switching with Michif and Media Lengua is the diversity of the languages which constitute his comparison. It is not reasonable to expect that a mix of Turkish and Dutch will resemble French-Cree or Spanish-Quechua mixes, given the typological dissimilarity of the languages involved in the respective mixes. Code-switching and mixed languages are the product of the interaction of structures from different languages, as was discussed in the previous chapter. Thus different combinations of languages result in different mixtures. Comparisons of code-switching types and mixed languages need to consider mixes of the same languages, or typologically similar languages at the very least.

Bakker (2003, p. 132-34) suggests that there is documentation of both code-switching and mixed languages for a number of language pairings, though little comparative work has been done. In one case, Bakker finds different patterns of mixing in one of these language pairs - a Romani-Turkish mixed language spoken by Geygel nomads and a case of Romani-Turkish code-switching in Turkey and the Balkans. In the code-switching Turkish verbs are never found with Romani inflectional endings, however in the mixed language the structural integrity of the Turkish verb is undermined. Here Romani stems are found with Turkish verbal inflections. Because Romani stems are unable to combine with Turkish verbal morphology in the code-switching, the pattern of mixing is

⁵³ In actual fact this is the pattern which is found in Michif where the NP grammar and lexicon is predominantly French and VP grammar and lexicon, Cree. Media Lengua is perhaps the only known mixed language which strongly maintains a language divide between its grammar and lexicon.

predominantly alternational. On the other hand, the comparable mixed language looks insertional with language switches between stems and affixes very common. Bakker concludes that language contact processes other than code-switching must have led to the genesis of this Romani-Turkish mixed language.

An example of insertional code-switching and a mixed language which consists of similar languages also exists. Michif has been compared with various synchronic descriptions of insertional code-switching between pairs of English or French, and an Algonquian language, for example, Plains Cree-English code-switching (Bakker, 1997, p. 181-82) and Montagnais-French (Drapeau, 1991, cited in Bakker 1997, p. 184-86). Bakker finds that a common pattern of switching in all of these cases involves noun phrase and prepositional phrase insertions from French or English. This insertion pattern reflects the NP-VP split found in Michif, where French dominates the NP structure. Bakker presents a number of objections to the link between this type of code-switching and Michif⁵⁴, however he suggests that insertional code-switching and mixed languages in general do show striking typological similarities.

If all words in a matrix language are replaced with stems from another language, the result looks exactly like an intertwined⁵⁵ language. It is therefore not surprising that insertional code-switching has been suggested as a path towards intertwined languages. (Bakker, 2003, p. 129)

This conclusion is the result of comparing code-switching to just one group of mixed languages, the G-L (Grammar-Lexicon) languages (though it must be noted that Michif belongs to the V-N class) (see §1.5.1 for a discussion of mixed language typology). The grammatical frame of G-L mixed languages comes from one language, and lexemes from another language are inserted into this frame (Bakker, 2003, p. 125). The resultant structure looks much like insertional code-switching. *Media Lengua* is the prototypical case of this class of mixed language, however there are few other mixed languages which

⁵⁴ Thomason (2003) provides some good counter-arguments to Bakker's objections about a causal link between French-Cree code-switching and Michif.

⁵⁵ Bakker refers to mixed languages as intertwined languages.

exhibit such a neat split between the grammar and lexicon. It is likely that other classes of mixed languages will show similarities with different code-switching structures.

5.2.3 Insertional and alternation patterns in Gurindji Kriol, the mixed language

In general, comparisons of different types of mixing between the same languages yield more insights into the link between different patterns of code-switching and mixed languages. These studies are more fruitful than equivalent studies which draw together more distantly related languages. However they are still limited because the comparable language contact varieties are not linked socially or historically. They are usually synchronic comparisons of different groups of people, a problem which stems from the paucity of available data. One of the advantages of the Gurindji-Kriol code-switching and mixed language data is their diachronic and social connection. Gurindji Kriol, the mixed language is spoken by the children and grandchildren of the people whose code-switching practices are represented in the *Killer* transcript. This link allows a much more convincing comparison of these language contact varieties. Indeed many of the patterns found in the code-switching have continued into the mixed language. As was shown in §4.2 (c.f. McConvell & Meakins, 2005), the dominance of the Kriol VP structure and the use of Gurindji case morphology are found in both contact situations. Thus utterances which resemble each other can be extracted from both data sets - (68) is an example of Gurindji-Kriol code-switching and (69), the mixed language. Both contain Kriol verbs, verbal inflections and pronouns, and Gurindji derivational and case morphology in the NP.

(68) *kaa-rni-mpal* said orait yutubala kat-im *ngaji-rlang-kulu*.
 east-UP-ACROSS side alright 2DU cut-TRN father-DYAD-ERG
 "You two, father & son, cut it across the east (side of the cow)."
 (*Killer* transcript - G-K CS)

(69) an skul-*ta-ma* jei bin hab-im sport *karu-walija-ngku*.
 and school-LOC-DIS 3PL.S NF have-TRN sport child-PAUC-ERG
 "And the kids had sport at school."
 (GK ML: FM060.A: LS20yr: Conversation)

The similarity between these varieties of Gurindji-Kriol language mixing extends to insertional and alternational patterns. Both of these mixing strategies, which were found in the Gurindji-Kriol code-switching in the previous section, are also present in the mixed language. At this point, it is worth noting that the similarity between Gurindji-Kriol code-switching and the mixed language may suggest that Gurindji Kriol is in fact a variety of code-switching. However many features of Gurindji Kriol differ from the source languages and are not found in the 1970s code-switching, demonstrating that the mixed language is in fact an autonomous language system, rather than code-switching. Some of these features are discussed in §1.5.2.

First, many aspects of Gurindji Kriol bear a striking resemblance to *insertional* code-switching. Some of these patterns were observed in the code-switching, however others are more dominant in the mixed language. Similar to the code-switching data, 'insertions'⁵⁶ of single content words such as direct objects, intransitive subjects and verbs occur often in the mixed language. Example (70) shows a direct object insertion pattern. A switched intransitive subject is found in (71), and a Gurindji coverb is used in conjunction with Kriol tense marking in (72)⁵⁷. This example also demonstrates the common embedding of Gurindji morphemes, the ABA pattern which is characteristic of insertional code-switching.

⁵⁶ Here I place *insertions* in inverted commas because these words are not actually inserted, but are a part of the mixed language system. Approximately 63% of vocabulary of Gurindji Kriol is fixed - i.e. words are derived from either Gurindji or Kriol - with 37% involving a true choice between languages (see §A1.1.3). Thus I use *insertion* and other code-switching terms for comparative purposes, and I do wish to imply that switching is taking place. Insertional *patterns* can be observed, however elements are not actually inserted as in code-switching.

⁵⁷ Interestingly, Gurindji coverbs never occur with a transitive marker. Sequences of "Gurindji coverb-im im (verb-TRN 3SG.O)" are never found. Sequences of "Gurindji coverb im" are ambiguous, in that it is not clear whether *im* is a transitive marker or a 3SG pronoun. However I suggest, that, given that the sequence - *im im* does not occur in my 80 hours of Gurindji Kriol data, it is an object rather than transitive marker in the single occurrences. This gives more weight to the argument that the transitive marker is a lexicalised suffix, rather than inflectional (Schultze-Berndt, per. comm.), §A1.11.5.1.

- (70) *kirri-ngku* i=m kil-im-bat *ngarlu*.
 woman-ERG 3SG.S-NF hit-TRN-CONT **honey**
 "The woman hit the hive in order to get honey."
 (FHM064: RR23yr: Ergative bingo)
- (71) tu *karu* pleibat autsaid shop-*ta*.
 two **child** play outside shop-*loc*
 "Two **kids** play outside of the shop." (FHM097: SE12yr: Locative pictures)
- (72) det man-*tu* i bin *jampurlk* im *nyanuny* mami.
 the man-ERG 3SG.S NF **squash** 3SG.O 3SG.DAT mother
 "The man **squashed** his mother." (FHM101: TA13yr: Ergative pictures)

There are no restrictions on switching between content words and bound inflectional morphology in the mixed language. This pattern was rare in the *Killer* transcript. Of particular interest, there are no restrictions on combinations of Kriol nouns and Gurindji nominal morphology. The use of Gurindji-derived morphology in relation to the language of the root is tested for in the study of ergative marking in §9.5.1, with no significant differences found. For example, in (73), a Kriol transitive subject "man" is found with a Gurindji ergative marker. Similarly a Kriol noun "chair" takes a Gurindji locative marker in the final NP. In general, the whole utterance exhibits the ABA pattern which is characteristic of insertional code-switching.

- (73) det **man-*tu*** i bin *jak* aiskrim **jiya-ngka**.
 the **man-ERG** 3SG.S NF make.fall icecream **chair-LOC**
 "The **man** split the icecream **on the chair**."
 (FHM053: SS18yr: Locative pictures)

Despite the presence of mixed language clauses which look insertional, much of Gurindji Kriol exhibits the sorts of *alternational* patterns which were found in the code-switching data. For example, many switches in the mixed language can be characterised as being peripheral - (i) they are not closely related to the predicate argument structure and (ii) are found on the edge of the clause. The locational phrases found in (74) are peripheral in both of these senses. "From the rock" and "into the water" are an adjunct and a complement respectively, which describe the trajectory of the intransitive verb "jump". They are also found on the right margin of the clause.

- (74) *jintaku* *boi* *i=m* *jamp* *wumara-nginyi* *ngawa-ngka*.
 one boy 3SG.S=NF jump **rock-ABL** **water-LOC**
 "One boy is jumping **off the rock into the water.**"
 (FHM124: RS20yr: Allative pictures)

Syntactically unintegrated units such as discourse markers are another property of alternational code-switching which I found to be common in the *Killer* transcript. The use of Gurindji discourse markers where Kriol dominates the verb phrase has continued into the mixed language. For example, in (75) the exclamative "goodness" affects the interpretation of the following sentence, and (76) "after that" links a previous event with the one being described in the sentence.

- (75) *wartarra* *kakkak* *garra* *bait-im* *yu*.
goodness dangerous.animal FUT bite-TRN 2SG
 "**Goodness** that animal is going to bite you." (FM002.B: SS18yr: Conversation)

- (76) *nyila-nginyi-ma* *karu-ngku-ma* *ged-im* *im*
that-ABL-DIS child-ERG-DIS get-TRN 3SG.O

det *warlaku-ma* *muk-ta-rni*.
 the dog-DIS quiet-LOC-ONLY
 "**After that** the child gets the dog really quietly."
 (FM17.C: RR23yr: Monster story)

All of the utterances above also display another feature of alternational patterns which were discussed for the Gurindji-Kriol code-switching data - multiple constituent switching. For example, (74) begins in Gurindji, switches to Kriol and then finishes with two consecutive Gurindji NPs. In (75) a Gurindji discourse marker and noun is followed by a Kriol V', and finally in (76) the sentence begins with a sequence of a Gurindji demonstrative and NP, switches to Kriol and finishes with a Gurindji NP and subordinate clause. All of these constituents are multi-morphemic.

Dislocated constituents⁵⁸ are also common in alternational code-switching. The behaviour of case-marked Gurindji nominals in Gurindji-Kriol code-switching was described in detail in the previous chapter. I observed that they were always found as dislocated elements which I suggested was due to a lack of congruence between these nominals and equivalent Kriol nominals which are not case-marked. Many case-marked nominals are still found dislocated in the mixed language. For instance, 55% of all ergative-marked transitive subjects are dislocated in Gurindji Kriol, as in (77) and (78) (see also Figure 12 §9.5.3). However, as was discussed in §4.4.2, case-marked nominals are also integrated into the argument structure of the mixed language clause. For example in (79) "the child" is an argument of the verb, not dislocated, that is the NP occurs peripherally and no co-referential pronoun is also present.

(77) an kengkaru **i** bin kil-im *kurrupartu-yawung* **det karu-ngku.**
 and kangaroo **3SG.SNF** hit-TRN boomerang-PROP **the child-ERG**
 "And **the kid** hit the kangaroo with a boomerang."
 (FHM082: AC11yr: Ergative pictures)

(78) **det karu-ngku** *kurrupartu-yawung* **i** garra kil-im *jamut.*
the child-ERG boomerang-PROP **3SG.SFUT** hit-TRN turkey
 "The **kid** hit the turkey with a boomerang."
 (FHM062: RR23yr: Ergative pictures)

(79) **wan karu-ngku** kil-im *jamut* gat *kurrupartu.*
one child-ERG hit-TRN turkey PREP boomerang
 "One **kid** hit the turkey with a boomerang."
 (FHM083: JA11yr: Ergative pictures)

In all, strong similarities between Gurindji-Kriol code-switching and the mixed language can be found. Both insertional and alternational patterns are present in both forms of Gurindji-Kriol mixing. However Bakker (2003, p. 129) believes that these types of comparisons are superficial, and highly selective. He suggests that it is not difficult to isolate example sentences from code-switching corpora and produce patterns which

⁵⁸ As in the previous chapter, I define dislocations as NPs which occur on the edge of a clause and in conjunction with a co-referential pronoun. Another feature, which is often given for dislocations, is a separate intonation contour. This analysis was not possible for the code-switching data as the audio is no longer available. In order to keep my analysis consistent, I have not used this prosodic feature in my analysis of Gurindji Kriol dislocations despite the availability of audio.

resemble a mixed language. Bakker concludes that these examples are marginal and it is not reasonable to create generalisations from a small number of utterances. Indeed, it is not the case that all Gurindji-Kriol code-switching structures match the resultant mixed language. As was described above, case-marked nominals are present in the mixed language as sole indicators of arguments, where they are not found in the code-switching. This transition and the importance of alternational code-switching to this transition will be discussed in §5.4. Other alternational structures are also not present because the content of them is no longer used. For example many switches contained Gurindji directionals based on compass points and river drainage. These directionals have virtually disappeared from Gurindji Kriol (§A1.10), along with the alternational structure. Another difference can be found in the insertional pattern of switching between roots and bound morphemes, as was shown in (73). These switches were rarely used in the code-switching, but are unrestricted in the mixed language. These differences support Bakker's suggestion that it is somewhat simplistic to look for neat correspondences between a prior code-switching stage and a resultant mixed language. Mixed languages are not merely fossilised forms of code-switching. It is likely, then, that there is an intermediary stage between code-switching and the formation of mixed languages. If this is the case, mixed languages will resemble this stage more closely than the code-switching stage.

The following section will consider two models which propose a transitory phase between code-switching and mixed languages (Auer, 1999; Myers-Scotton, 2003). These models again favour insertional code-switching as a predecessor to mixed languages. Both insertional and alternational code-switching may be present before the mixing stabilises, however the alternational structures are lost during this process, according to these models. The structural constraints on insertional code-switching are deemed responsible for the narrowing of variation in the mixing and the resultant character of the mixed language. §5.4 will discuss this issue in more detail.

5.3 The transition from code-switching to mixed languages

As early as 1988, Myers-Scotton (Scotton, 1988, p. 158) had proposed an intermediate phase between code-switching and mixed language development in which code-switching becomes the socially unmarked form of communication in a speech community. Auer (1998b; 1999) and Myers-Scotton (1993a; 2003) theorise such a stage in their transitional models for mixed language genesis. It is unfortunate that the Gurindji-Kriol mixing from the 1980s is under-documented. The language spoken during this period probably provides the link between the code-switching and subsequent mixed language. Any available data is described in Dalton et al (1995).

5.3.1 Auer's grammaticalisation of code-switching model

The first transitional account comes from Peter Auer (1998b; 1999, p. 309-10) who presents a model of the grammaticalisation of code-switching (Stage 1) into a mixed language⁵⁹ (Stage 3) via language mixing (\approx Backus' mixed lect) (Stage 2). A "cline" from pragmatics to grammar can be observed between these three stages of mixing, where code-switching loses its pragmatic function over time and the shape of the mixing is increasingly determined by grammatical constraints (1998b, p. 16). These three forms of bilingual speech are differentiated by the type of mixing, and their degree of variation and social markedness. First *code-switching* is the most variable and socially-marked form. By "socially marked", Auer (p. 310) is referring to the social weight carried by each language and the associated social meaning of switching between languages. Typologically, code-switching at this stage can be alternational and/or insertional (p. 313-14). Stage 2 *language mixing* also exhibits patterns of code-switching, but the social meaning associated with the switches is lost. Instead syntactic factors in the form of structural constraints play a role in the language switches. These syntactic constraints were discussed in §4.4.1 and I will revisit them in §5.4. Both alternational and insertional code-switching may be present in the language mixing stage, however Auer (1999, p. 315) believes that these patterns converge making it difficult to distinguish them. Finally

⁵⁹ Auer refers to mixed languages as 'fused lects'. I will continue using the term 'mixed language' for consistency.

mixed languages differ from language mixing in a number of ways. Auer suggests that they lose any hint of alternational code-switching, looking entirely like insertional structures. They contain much less syntactic variation than language mixing; functionally equivalent structures from both languages may develop more specialised uses in the mixed language; and mixed language speakers do not need to be speakers of either of the contributing languages (p. 321).

The first stage in the transition from code-switching (Stage 1) to a mixed language (Stage 3) is the movement from code-switching (Stage 1) to language mixing (Stage 2). This transition involves code-switching somehow losing its pragmatic function and systematising in a manner more often associated with insertional code-switching. Auer associates alternational code-switching patterns with pragmatic motivations. As a result he suggests that alternational code-switching may still be present during this transition but much less salient, due to the loss of pragmatic function. Auer believes that frequency plays an important role in the loss of code-switching's pragmatic function, claiming that "the more frequently codeswitching occurs, the less salient it becomes; as a consequence, the potential for using it in locally meaningful ways is diminished" (p. 320). One reason that code-switching may become a frequent practice is that a bilingual group may wish to couch its identity in relation to both groups, such that they positively orientate towards the language mixing. As the pragmatic function is lost, structural constraints become more responsible for the shape of the code-switching. Maschler (1998, p. 137), in a study of Hebrew-English code-switching, sees this as a process of grammaticalisation (in the sense of Du Bois (1985) and Heine (1997)) in which the variation present in code-switching begins to be constrained, and certain constructions become more prevalent. She believes that the process of the sedimentation of code-switching patterns is measurable. First, recurrent patterns are statistically countable, and then a structural pattern may be discerned and constraints proposed.

The next transition is from the language mixing to the mixed language (Stage 2-3). This stage requires speakers to "further constrain the possibilities of juxtaposing the two languages and develop functional specialisations" (Auer, 1999, p. 323). As a result, Auer

suggests that mixed languages should resemble insertional code-switching. Auer does not believe that structural sedimentation occurs simultaneously in this transition. He suggests that different grammatical elements move along this path at varying speeds. For example, he demonstrates that relatively unbound grammatical elements such as discourse markers, conjunctions and certain adverbials may systematise earlier in the code-switching→LM→mixed language continuum than other more bound elements (p. 324). Constituents may also find their way into a mixed language without their original function remaining intact. As Auer suggests "this restructuring may represent a step towards a FL" (1999, p. 329, where fused lect=mixed language). Borrowing scales, such as those described in §3.2.1, are probably a good means of tracking the progressive sedimentation of elements. Double marking may also be another indication of the transition to a mixed language, particularly in cases where congruent structures are not present in both languages, for example where location is marked by preverbal elements, such as prepositions in one language and post-verbal elements in another (p. 329).

In general Auer's transitional model resists the temptation of merely comparing the beginning and end states of language shift. He is also not overly simplistic by suggesting that these stages are clearly delineated. Instead he proposes that changes in individual elements may progress at different rates and can be mapped over time, creating the effect of a continuum. I suggest that this notion of incremental grammaticalisation of different structures in the code-switching applies well to Gurindji Kriol, as I demonstrate in §5.3.3. Auer also maps the shift from code-switching, which may contain both insertional and alternational structures, to a mixed language which he suggests exhibits only insertional structures. This development of mixed languages is characterised as a progressive loss of alternations and the grammatical specialisation of insertions. This analysis is not upheld in the Gurindji Kriol data. As was observed in §5.2.2, alternational structures are present in the mixed language, and have not disappeared as predicted by Auer.

In all, the innovation of Auer's model is to consider stages of change, and the grammaticalisation of insertional features at various points along a timeline. Nonetheless Auer does not discuss the details of why particular elements may grammaticalise in

particular ways. A model which does address the more structural aspects of change from code-switching to mixed languages is Myers-Scotton's Matrix Language Turnover model.

5.3.2 Myers-Scotton's Matrix Language Turnover Model

Carol Myers-Scotton provides the second major approach which theorises the move from *insertional* code-switching to a mixed language⁶⁰. Though she does not explicitly frame her Matrix Language model of code-switching in terms of insertional code-switching, her description of code-switching closely matches definitions of insertional code-switching (though her notion of EL islands is closer to alternational code-switching). She defines code-switching as "the selection by bilinguals ... of forms from an embedded variety ... in utterances of a matrix variety during the same conversation" (1993a, p. 3). Indeed Muysken (2000, p. 3) considers her model to be based on insertional code-switching.

Myers-Scotton began her work in language contact studying code-switching. Unlike many contemporaneous social motivation-based approaches, she chose to examine codeswitching from a grammatical structure perspective (2002, p. 8). Her model, called the Matrix Language Frame (MLF) model, claims to use the same principles to explain the end form for all language contact phenomena, including code-switching, creole languages and mixed languages.

I will propose that the same abstract principles and processes structure all contact phenomena, even though the details of how they are played out in various phenomena differ. (2002, p. 6)

The MLF model, including the notions of the matrix language (ML), embedded language (EL) and the 4-M model, provides the framework for Myers Scotton's description of the transition from code-switching to mixed language genesis. This model was described in §4.4.1. She labels this transition the Matrix Language Turnover Hypothesis, which I discussed in §3.5. This hypothesis is concerned with the change in dominance of the

⁶⁰ Myers-Scotton calls mixed languages "split languages" due to the negative connotations associated with the word "mixed". However for consistency I will continue using the term "mixed language".

participating languages. Mixed languages arise when there is a turnover under way, but it does not go to completion. That is, the source languages do not entirely change in dominance but stabilise somewhat through this process resulting in a Matrix Language which is a combination of the source languages. This new matrix language must have *late* system morphemes from the weaker language to qualify as a mixed language. As was shown in §3.5, the matrix language of Gurindji Kriol maintains case morphology from Gurindji within a Kriol verbal frame. The previous chapter then demonstrated how this inflectional morphology came to be present in the mixed language. The utterance in (80) below exemplifies this resultant matrix language of Gurindji Kriol. Under Myers-Scotton's MLF model the verb tense morphology is Kriol and an instance of a bridge late system morpheme. Two examples of Gurindji dative morphology also occur. The first, *nyanuny* (3SG.DAT), is also a bridge late system morpheme. It has a possessive function and receives its assignment from the NP head, *ngumparna* "husband". The second dative, *-wu*, is an outsider late system morpheme as it receives its assignment from outside its immediate NP projection.

- (80) *nyila-nginyi* i=m tok *nyanuny* *ngumparna-wu*
 that-ALL 3SG.S=NF talk 3SG.DAT husband-DAT
- na *langa-ngka*.
 DIS ear-LOC
 "After that she talks to her husband, in his ear."
 (FHM026: TJ22yr: Dative pictures)

This view of the ML has interesting implications for theories which merely compare the typology of code-switching with the structure of mixed languages. A language frame which is a composite of more than one language should look quite different from insertional code-switching where the matrix language only consists of one language. According to Myers-Scotton's model, late system morphemes from more than one language should not be present in the first stage (classic code-switching), whereas they are present when the matrix language becomes a composite. This difference between the matrix language in code-switching and that in a mixed language needs an explanation of the link between the two forms. This suggests a process rather than simple fossilisation.

Like Auer, Myers Scotton also proposes three steps from insertional code-switching to composite code-switching (convergence) to the mixed language itself. The first two stages Myers-Scotton conceptualises as both outcomes and processes. In other words, they are both potential outcomes, as well as potentially transitory phases in the restructuring of the ML and, as a result, diachronic language shift. The mixed language itself is an outcome of these processes (2002, p. 101). Each of these phases is described structurally in terms of the MLF framework, although there are hints of a social analysis from earlier work (Myers-Scotton, 1988).

The first step in the Matrix Language Turnover is *classic* code-switching which is basically insertional code-switching, with alternational code-switching incorporated in the form of EL Islands. The more dominant language takes the role of the Matrix Language, with the less dominant language inserting or embedding morphemes within this grammatical frame (2002, p. 110). More lengthy switches to the less dominant language create EL Islands. Myers-Scotton proposes a number of constraints on classic code-switching which shapes its structure. These are the Morpheme Order Principle, System Morpheme Principle, ML Blocking Hypothesis and EL Island Trigger Hypothesis, which were discussed in §4.4.1.

The second stage, *composite* code-switching, occurs when the participating languages begin to converge, such that one of the participating languages loses its undisputed role as the matrix language. In this respect, the weaker or embedded language gains strength. The matrix language splits and recombines to form a composite structure consisting of abstract material from both languages. This process is hierarchically ordered in terms of the 4-M model (see §3.5). Content morphemes are incorporated into the ML initially, and, in some cases, system morphemes later (2002, p. 101). This pattern does not look dissimilar from the borrowing scales discussed in §3.2.1. The convergence of the EL and the ML represents a change in the morphosyntactic frame. This convergence precedes the third stage. Some of the possible outcomes of the turnover are fossilisation with the two contributing languages constituting the ML, a shift to a new ML (a complete turnover of

late system morphemes), or an abandonment of the mixed language for an abrupt shift to the "invading" language. All of these changes represent points on a diachronic scale described in the Matrix Language Turnover hypothesis. Mixed languages "represent turnovers that do not go to completion, but 'stop along the way' " (2002, p. 249). Mixed languages stop at different places along the scale, which explains why they surface in different forms and with the split in different places.

Myers-Scotton's model bears a number of similarities with Auer's attempt to map the progress from a predominantly insertional style of code-switching to a mixed language. Like Auer, Myer-Scotton proposes an intermediate stage between these two forms of language contact. However where Auer frames this stage in terms of the code-switching becoming socially unmarked and the reduction of alternational structures and variation, and subsequent grammaticalisation, Myers-Scotton describes the shift in terms of her MLF model. Myers-Scotton provides much more detail about the shape of the language frame, in terms of its morphological makeup. She also theorises the grammaticalisation of particular structures by proposing various constraints on the code-switching. This transitional model resonates well if Gurindji-Kriol code-switching and the resultant mixed language are compared. As will be discussed in the next section, it is likely that changes to the structure of the code-switching occurred incrementally, and the code-switching did not merely fossilise at one point. The most radical change was the integration of Gurindji case morphology (late system morphemes, in Myers-Scotton's terms) into the structure of the Kriol matrix clause. The result was to produce what Myers-Scotton calls a *composite* matrix where both languages contribute to the grammatical frame of the language. However, just how these system morphemes are intergrated is not discussed by Myers-Scotton. I have suggested for Gurindji Kriol, for example, that Gurindji case morphology was introduced through adjuncts, and I investigate this issue further in §5.4 in terms of alternational structures.

5.3.3 Gurindji-Kriol mixing in the 1980s

Again, one of the clear problems with both Auer and Myers-Scotton's models is the lack of empirical evidence to demonstrate how code-switching might develop into a mixed language. In the case of Gurindji Kriol, it is also quite hard to map the transition from the Gurindji-Kriol code-switching of the 1970s to the current mixed language. The time during the 1980-90s is unfortunately under-documented, and is likely to be the period where the code-switching began to systematise. Observations about the language situation at this time were made by Gurindji students⁶¹ at Batchelor College studying with McConvell (Dalton et al., 1995). They noted a number of features of the Gurindji-Kriol code-switching that had regularised and other features which were unlike the code-switching. These changes suggest that Gurindji-Kriol mixing was in the process of grammaticalising, and may be considered in terms of Auer's second stage, language mixing, or Myers-Scotton's second stage of composite code-switching. Gurindji bound pronouns and inflecting verbs were no longer being used: compare (81) and (82); word order was predominantly a Kriol/English SVO pattern; all verbs had adopted Kriol verb morphology to mark inflectional categories such as TAM marking (81), (83) and (85); Gurindji case suffixes could be found on Gurindji free pronouns (83) which is not the case in traditional Gurindji (84); Gurindji case allomorphy had simplified; and Gurindji coverbs could be used within the Kriol VP matrix (85). (Dalton et al., 1995, p. 87-91)

(81) **ai-m** gon-bek Top Spring-*jirri*.
 1SG.S-PRS go-back NAME-ALL
 "I'm going back to Top Springs." (1980s G-K mix)

(82) **ngu-rna** *wart* **ya-nana** *Yingawunarri-yirri*.
 CAT-1SG.S return **go-PRS.IM** Top.Spring-ALL
 "I'm going back to Top Springs." (Gurindji)

⁶¹ These students were Lorraine Dalton, Sandra Edwards, Rosaleen Farquarson and Sarah Oscar. Sandra and Sarah have continued their interest in Gurindji Kriol by assisting with this project. See §1.3, and acknowledgements.

- (83) *ngayu-ngku* bin luk *karnti*.
1SG-ERG PST look tree
 "I saw a tree." (1980s G-K mix)
- (84) (*ngayu*) *ngu-rna* *karnti* *karrap* *nya-nya*.
1SG CAT-1SG.S tree look see-PST.PER
 "I saw a tree." (Gurindji)
- (85) *Nangala* bin *kutij*.
 SUBSECT PST **stand**
 "Nangala **stood up**." (1980s G-K mix)

It is not clear at this stage of the development of Gurindji Kriol whether the mixing found could yet be called a mixed language. There are a limited number of examples provided in this paper, but all of them resemble insertional code-switching patterns. It is not obvious from Dalton et al (1995) whether alternational patterns were also present. Indeed Auer predicts that alternational patterns would begin to disappear in this stage. However the mixed language data discussed in the previous section shows many alternational characteristics. It is more likely, then, that the lack of alternational structures is the result of limited data rather than a significant grammatical change. With more data it might also be possible to trace the timeline of changes in different elements. Nonetheless, some small observations can be made from Dalton et al's data. For example, the use of case morphology on Gurindji free pronouns was not apparent in the code-switching data from the 1970s. This extension of case marking patterns to free pronouns seems to have occurred in the transitional stage and continues to be used in the current mixed language. The transition of Gurindji case-marked nominals from dislocations to arguments also seems to have also begun in the 1980s. (83) shows one example of a case-marked transitive subject used as an argument rather than a dislocated phrase. As was discussed in §4.2, case-marked nominals were only found as dislocated elements in the previous stage of mixing, but are quite commonly used as arguments in the mixed language. In general, it is unlikely that the progression from Gurindji-Kriol code-switching to the

mixed language occurred in easily demarcated stages, however the little data from the 1980s allows some observations to be made about the progress of this change.

5.4 The predictability of code-switching and mixed languages

One theme that recurs in these transitional models is the association of discourse motivations with alternational code-switching, and structural constraints with insertional patterns. In this respect, alternational code-switching is considered to be a socially-marked form of language mixing which is unconstrained by the structures of the interacting languages, and is therefore unlikely to grammaticalise into a stable autonomous language. On the other hand, insertional code-switching is assumed to be more rule-governed and predictable, properties which lend themselves to grammaticalisation. And indeed to date, the focus on G-L mixed languages which have predominantly insertional features has supported the idea that mixed languages are the result of insertional code-switching. However, as I argued before, alternational structures are found in both Gurindji-Kriol code-switching and the resultant mixed language. This section considers the *predictability* of alternational structures and therefore their ability to conventionalise. Specifically I outline Backus's (2003) objections to the grammaticalisation of alternational structures, and present some counter-arguments. I argue that alternational code-switching can also be shaped by the structural interaction between the participating languages. In the case of Gurindji Kriol this type of code-switching is ultimately responsible for Gurindji case-marking in Gurindji Kriol.

Backus (2003) suggests that alternational code-switching is driven by discourse motivations which, he claims, cannot be conventionalised. Moreover he believes that the key to forming a mixed language lies in the ability of code-switching patterns to conventionalise. Conventionalising requires code-switching between languages to be predictable, thereby narrowing the degree of structural variation. This stage of conventionalisation would begin to occur at Myers-Scotton's stage of composite code-switching or Auer's language mixing stage. Backus suggests that one of the characteristics of alternational code-switching is that it is impossible to predict when a speaker will use language A or language B. Alternational code-switching "entails

unbridled variation" (2003, p. 240). Bakker makes a similar statement about the problem that this level of unpredictability creates for mixed language formation.

Of course, if one would have alternational CS it would be much more difficult to fossilise, since all grammatical and lexical elements must remain part of the new way of speaking: there is no systematic way of sorting out a combination of elements on the basis of the alternational CS. (Bakker, 2003, p. 131, where CS=code-switching)

Backus (2003) suggests that the unpredictability of alternational code-switching is the result of discourse functions which he believes are entailed by this type of switching. These functions include alignments with another culture and topic changes. This approach is similar to McConvell's (1985a; 1988a) social motivations approach discussed for Gurindji Kriol in §4.4.1. Backus (2003, p. 248) finds these types of switches occur in his Turkish-Dutch mixed lect data. However, as he notes, these types of discourse functions are not exclusive to code-switching but to conversation in general. Thus it is necessary to identify patterns which might be exclusive to code-switching (2003, p. 249). Particular discourse functions need to become exclusively associated with one language, thereby moving code-switching along the road to conventionalisation. Backus finds little evidence of this in his own Turkish-Dutch data which he describes as a mixed lect, a more conventionalised form of code-switching. Nonetheless he finds some support in Hill and Hill's (1986) Mexicano code-switching data where certain switch sites are favoured, such as between the topic and comment. In general, Backus concludes that it is simply not in the nature of alternational code-switching to conventionalise because this would mean losing its inherent communicative function. The choice of language, rather than lexical item, is always a communicative choice.

Despite Backus' predictions about alternational code-switching and mixed language genesis, Gurindji Kriol contains alternational structures, which suggests that there are some problems with Backus' analysis. Indeed two issues arise which are related to Backus' focus on discourse motivations for code-switching - (i) work in grammaticalisation demonstrates that extra-linguistic meaning such as pragmatic meaning found in implicatures can in fact conventionalise, (ii) though all code-switching

finds its origins in discourse motivations in the most general sense, the patterns found in alternational code-switching are not necessarily discourse-driven, but are shaped by the structures of the respective languages.

First, Backus' assumption that discourse motivations cannot conventionalise is not upheld in other work on language change. A similar view existed in earlier versions of grammaticalisation theory with regard to pragmatic meaning, where the process of grammaticalisation was framed in terms of deficits, such as the loss of semantic complexity, syntactic freedom, and pragmatic significance (Givón, 1979; Heine & Reh, 1984, p. 15). However Traugott and König (1991) argue that pragmatic meaning is not necessarily lost and, for example, pragmatic implicatures can conventionalise to become a part of word semantics. For example, inference has given additional meaning to connectives in English. *Since* began its life in Old English as a temporal connective, which merely linked two events. However, in Modern English, it has acquired an additional causative meaning (86) and (87). Traugott and König (1991, p. 194 onwards) describe this change in terms of a process of grammaticalisation, whereby the juxtaposition of two clauses with a connective led to an attribution of causality to the connective.

- (86) I have done quite a bit of writing **since** we last met. (temporal)
 (87) **Since** you are so angry, there is no point in talking to you. (causal)

Similarly topic and focus markers commonly develop from pragmatically neutral elements of a language. For example, Kriol has a focus marker *na* which developed from the English word *now* (Graber, 1987). It is also used in Gurindji Kriol (§A1.6.3.3.2), and is a common borrowing in Australian languages in contact with Kriol (Schultze-Berndt, forthcoming). Though there are differences between discourse and pragmatic meaning, what is important here is that there is little empirical support for the notion that code-switching must lose the discourse meaning associated with the interacting languages and the act of switching itself in order to conventionalise.

The second assumption that Backus makes is that alternational code-switching is in fact a socially marked activity in the first place. I have shown that alternational patterns were present in Gurindji-Kriol code-switching (§5.2.2) and have argued that code-switching at this time was a socially *unmarked* form of language mixing (§4.4.1 onwards). Switches between languages in this form of language contact are unmarked, that is neither Gurindji nor Kriol, nor a switch between languages is associated with a particular discourse function, such as joking or a topic change. If discourse functions are the underlying motivation for switches, they are unlikely to be present in an unmarked form of switching. These switches would need to lose their marked discourse function, but in doing so, the motivation for the switch is lost.

Related to this problem is the link between functional motivations and predictability. Backus suggests that code-switching which is predictable is more likely to conventionalise. He further suggests that alternational code-switching is not predictable. However the issue is not that alternations cannot be predicted, but rather that switches in general cannot be predicted on the basis of *discourse* motivations. Discourse motivation approaches may provide a framework for discussing the *meaning* of switches but they have a limited predictive power. These motivations for the switch can only be attributed *after* it occurs. On the other hand structural factors have slightly more predictive power in that they determine permissible switch sites. These constraints-based approaches (see §4.4.1 onwards) help determine where it is *possible* to switch languages, and where it is more probable that code-switching will occur. Indeed these approaches also are somewhat limited in their predictive power. For instance, they do not necessarily predict that switching will always occur at identified switch sites, and they do not have anything to say about the non-occurrence of switches at potential switch sites. Nonetheless these approaches provide more information about the likelihood of switching. Predictability, then, is not an issue for alternational code-switching, but for all accounts of code-switching.

Nonetheless, Backus is right in suggesting that the predictability of code-switching and its corresponding ability to conventionalise is an important issue for accounts which describe the shift from code-switching to a mixed language. Structural constraint-based theories provide a better approach for discussing predictability. Switches cannot be predicted absolutely, however the probability of switching is increased where the structures of the languages allow switching to occur. Where the probability of switching increases, the variation in the language mixing decreases, creating the type of progressive pathway to grammaticalisation which was discussed in the previous section. Although structural constraints theories generally focus on insertional code-switching, switch points which produce alternations can be shown to be restricted by the structures of the interacting languages. Thus accounts of alternational code-switching are not restricted to functional approaches.

5.5 Gurindji Kriol as the product of insertional and alternational codeswitching

My approach in the last two chapters has been to define code-switching on the basis of typological features and to look for structural motivations for code-switching (c.f. Muysken, 2000). Both insertional and alternational code-switching can be described in terms of constraints without evoking notions of discourse. Both of these forms of code-switching can be shown to be constrained by structural features of the interacting languages. In the case of insertional code-switching, a number of theories propose structural constraints on this form of language contact, including the Free Morpheme Constraint and Congruence Constraint (Pfaff, 1979; Poplack, 1980; Poplack, Sankoff, & Miller, 1988; Sankoff & Poplack, 1981), Government constraints (DiSciullo, Muysken, & Singh, 1986), constraints based on Myers-Scotton's notion of the Matrix Language and the 4-M model (Myers-Scotton, 1993a; 1993b; 1998a; 1998b; 2000; Myers-Scotton & Jake, 2000a; 2000b), and finally Categorical Congruence (Sebba, 1998). These theories were discussed in relation to the Gurindji-Kriol code-switching data in the previous chapter. While my discussion of alternational code-switching is not framed in terms of constraints, alternational switches follow particular structural patterns. Muysken's typology of alternational code-switching identifies a number of features, such as

peripherality, which makes alternations more predictable. Myers-Scotton also discusses these features in terms of her EL Island Trigger Hypothesis and an implicational hierarchy of switch sites. In the case of Gurindji Kriol code-switching, I proposed an overarching principle in the last chapter based on aspects of structural congruence between Gurindji and Kriol. This congruence of structures was shown to drive the patterns of insertional and alternational code-switching. This principle may be considered the driving force behind the narrowing of structural variation in the mix and eventual conventionalisation into a mixed language. Nonetheless, as I will discuss in §10.3, variation is both present and an essential element in the push and pull of language change.

In the previous chapter, I discussed the patterns of pronominal and nominal switches in Gurindji-Kriol code-switching, and the behaviour of Gurindji case marking. I suggested that switches, and indeed the non-occurrence of switches, between Gurindji and Kriol were the result of perceived matches between pro/nominal structures in the two languages. A single notion of typological congruence was shown to drive these mixing patterns, which I have described in terms of insertional and alternational code-switching in this chapter. For instance, pronouns are never inserted, and nominals which do not require case-marking such as direct objects are inserted often. On the other hand, Gurindji argument nominals which are case-marked, such as transitive subjects (A) and indirect objects (IO) are not inserted into the core SVO structure of the matrix language clause. Instead they are introduced as dislocated alternations (doubled Kriol pronoun, case-marked nominal structure). I attributed this pattern of pro/nominal insertion and the ease of code-switching to the level of congruence between functionally equivalent elements in Gurindji and Kriol. Gurindji bound pronouns and Kriol free pronouns are structurally very different, whereas Gurindji and Kriol direct objects are alike in not being overtly case-marked. Gurindji and Kriol transitive subjects and indirect objects are not congruent structures. Gurindji A and IO nominals are case-marked, where Kriol equivalents are not, making them difficult to integrate into the structure of the mixed clause.

Alternational structures in the 1970s code-switching data were also responsible for the integration of other Gurindji case-marked nominals into the structure of Gurindji Kriol. These nominals included spatial nominals which are marked for local case such as locative, allative and ablative case. They form locative complements or adjuncts, and were therefore less bound up in the predicate argument structure of the code-switched clause⁶². In this respect they were therefore not restricted by the same code-switching constraints which were applied to the argument nominals such as transitive subjects and indirect objects. Thus alternational structures were essential for shaping the spatial complement and adjunct structures found in the mixed language.

These insertional and alternational patterns continue into the mixed language, as I have shown in this chapter. For example Gurindji verbal inflections are never found and correspondingly Gurindji bound pronouns are never found. The restriction on inserting Gurindji pronominal clitics into a Kriol matrix language in the code-switching has conventionalised into the mixed language. Similarly insertions of unmarked Gurindji nominals are found in both the code-switching and mixed language. Gurindji adjunct and complement case-marked nominals are also present. Perhaps more interestingly case-marked Gurindji argument nominals are now also a part of the core structure of the mixed language where they were only used in alternational structures in the code-switching. However, regardless of whether this alternational pattern remains strong in Gurindji Kriol, it is the contribution that alternational code-switching has made to the structure of the mixed language that is important. I would suggest that alternational code-switching has played an important role in the genesis of Gurindji Kriol. The presence of dislocated case-marked nominals in the code-switching in the 1970s was probably a bridge during a transitional period which eventually allowed case-marking to be incorporated into the clause structure of Gurindji-Kriol. Other case-marked nominals which were adjuncts and complements were integrated into the structure of Gurindji Kriol in a similar manner. In this respect alternational code-switching has been instrumental in shaping Gurindji Kriol. Coupled with Kriol verbal morphology, the presence of Gurindji case morphology has

⁶² See §A1.14.2 for a definitions of arguments, adjuncts and complements

created a grammar where the inflectional structures of both languages have intertwined to an extraordinary degree.

5.6 Conclusion

In this chapter, I have gone some way towards proposing the role that alternational code-switching has played in the development of Gurindji Kriol. More specifically, I have shown how Gurindji case-marking became an integral part of Gurindji Kriol grammar through its incremental introduction into the core structure of Gurindji Kriol via alternational structures. This picture of the genesis of a mixed language is based on a number of claims. Most generally, I claim that a mixed language can be the off spring of code-switching, which contradicts some proposals in the literature (Bakker, 1997; 2003), concurs with other views (Auer, 1999; Backus, 2003; Gardner-Chloros, 2000; Myers-Scotton, 1993a) and supports the empirical observations of McConvell and Meakins (2005). In particular, I suggest that alternational structures in the code-switching played a role in the structural outcome. This claim challenges the view that only insertional code-switching can lead to mixed language genesis which is based on (i) typological comparisons between code-switching and mixed languages, which suggest that mixed languages 'look' more like insertional code-switching than alternational code-switching, and (ii) claims that alternational code-switching is too unpredictable to conventionalise (Backus, 2003). In response to the first claim, I have shown that alternational structures can be present both in the code-switching predecessor and the resultant mixed language, and secondly it is incorrect to characterise alternational code-switching as 'unpredictable', and therefore unlikely to contribute to the mixed language. Finally, I have presented empirical evidence to suggest that mixed languages are not merely fossilised forms of code-switching, but rather the result of the gradual grammaticalisation of elements of the mix, which supports the views of Auer (1999) and Myers-Scotton (2003).

In general, I have demonstrated over the last two chapters that the overall moulding and narrowing of the code-switching structures along the path to mixed language genesis was largely the result of interactions between the grammars of Gurindji and Kriol. However, structural constraints on language mixing do not provide the full picture. Underlying constraints-based approaches is the assumption that morphemes pass between languages largely unchanged. In fact as the next chapters will demonstrate, many morphemes in Gurindji Kriol do not retain the same function or indeed form as their source morphemes. In particular, the Gurindji case markers present in Gurindji Kriol are not carbon copies of their Gurindji equivalents. All have a reduced set of allomorphs (see §A1.6.3.1) and their functional distribution has shifted in most cases. For instance Gurindji locative markers have been extended to goal constructions (§8) and the Gurindji ergative marker has begun to function as a discourse marker (§9).

The source of this change is variation. While structural constraints act to narrow variation in the language mixing, the variation itself also plays a role in the resultant structures. Variation both contributes to and results from the interaction and competition between functionally equivalent structures from interacting languages. For example Gurindji locative markers compete with Kriol prepositions, and argument-marking structures from Gurindji (ergative marking) and Kriol (SVO word order) are also in functional competition. Thus while structural constraints favour a form which is used to mark a particular function, the form may not retain the properties of its source language. A discussion of the role of variation in the development of Gurindji Kriol will be provided in §10.3.

Contact and competition between equivalent Kriol and Gurindji forms has had a number of outcomes. For example, in the case of possessive structures Gurindji completely dominates with the result that the Kriol structure has disappeared (§6.4). In other outcomes, the functional range of application of markers in both languages has broadened. For instance, though Kriol prepositions are rarely found, Gurindji locative markers have adopted the range of these prepositions to include both locational (§7.4) and goal marking (§8.4). Another outcome has been the loss of a structure's old function,

coupled with the gain of a new function. In §9.6, I will claim that competition with Kriol/English SVO word order has resulted in the pragmatic reinterpretation of the ergative marker. Compromise strategies may also be observed, for example, double marking (Kriol prepositions and Gurindji locatives in the locative adjuncts of younger GK speakers). The processes underlying this competition and change is discussed more §10.2 onwards.

Finally, considering *only* structural constraints as the sole influence on the shape of language mixing is also problematic for another reason. It is reasonable to assume that a range of factors shape emergent structures, including sociolinguistic variables such as age and group identification, and pragmatic meaning. For example, I will show in §7.4.2 that younger speakers of Gurindji Kriol are beginning to use Kriol prepositions in locational constructions where older speakers predominantly use the Gurindji locative marker. Both structures are available to speakers, however different factors help determine which structures dominate, including sociolinguistic factors and structural constraints. For instance, a structural analysis may help determine which structures are possible, and a sociolinguistic analysis may help explain why certain forms end up dominating. This range of variation will be discussed in §10.3.

Each of the following chapters follows a similar methodology. I begin by describing how a particular function, for example possession constructions, topological relations, goals or arguments, is marked in the source languages, Gurindji or Kriol. For Gurindji and Kriol, I generally rely on other descriptions of the languages, as well as some of my own data, as was described in the introductory chapter (§1.6.2). Most of these accounts of the source languages do not describe the variation already present in Gurindji and Kriol. Some variation is mentioned, such as optionally marked place names in goal constructions in both Gurindji and Kriol (reviewed in §8.3.1 and §8.3.2, respectively), but this variation is not quantified in any way. For example, it is not clear whether the allative marking or no marking is the favoured construction for place name goals in Gurindji⁶³. After describing

⁶³ A more thorough study should characterise the variation that exists in marking particular functions in Gurindji and Kriol before describing the results in the mixed language. Because part of the aim of my own

the available variants from Gurindji and Kriol, I then document the various forms which mark particular functions in the mixed language. I quantify the use of particular variants, showing which forms are more dominant than others. However, I also consider the variation to be meaningful, and account for the presence of a number of functionally equivalent forms. In order to both quantify and provide an explanation for the parameters of variation that exists in the Gurindji Kriol data, I use quantitative methods common to studies of sociolinguistic variation. More explanation of the quantitative method is provided in the relevant sections of the following chapters.

project is to provide as much descriptive information about a newly identified mixed language, I have chosen to rely on existing accounts of Gurindji and Kriol in order to examine more constructions in Gurindji Kriol. My approach, then, is to look wider (into the mixed language) rather than deeper (into the source languages). With more Gurindji and Kriol data, the latter approach can be explored in more detail later.

6. ATTRIBUTIVE POSSESSIVE CONSTRUCTION IN GURINDJI KRIOL⁶⁴

6.1 Introduction

This chapter begins the second section of this dissertation which examines the results of the interaction of Gurindji and Kriol forms within particular functional domains in Gurindji Kriol. Competition between Gurindji and Kriol forms and structures occurred in the formation of Gurindji Kriol, when the structures of these languages came into contact as a result of code-switching. Competition continues with the ongoing evolution of this mixed language, and its continuing contact with its source languages. Potentially, various outcomes may occur as a result of competition. Most generally, variation in the forms available from both languages provides the context for the language change and is itself a result of this process. More specifically, consequences of this language contact and competition include the dominance of one form over another, the change in the function and distribution of forms, and the emergence of new forms. This process of contact,

⁶⁴ This chapter elaborates on a preliminary study of possessive constructions in Gurindji Kriol and Light Warlpiri:

Meakins, F., & O'Shannessy, C. (2005). Possessing variation: Age and inalienability related variables in the possessive constructions of two Australian mixed languages. *Monash University Linguistics Papers*, 4(2), 43-63.

competition and variation in formation of the mixed language and its continuing life-cycle is drawn together in more detail in §10.

In this chapter, I demonstrate the first outcome of competition between Gurindji and Kriol functional equivalents - the almost complete dominance of a form from one language, coupled with the loss of a system which is marked in both languages. This outcome is shown in the domain of *attributive possessive constructions*. In these constructions, a possessive relationship between two entities is marked by the juxtaposition of two nominals, or a nominal and a pronoun, with or without dative marking, as shown in (88) and (89). In (88), the juxtaposition of two nominals denotes a part-whole relationship, whereas in (89) dative marking is used to relate a pronoun and a nominal (his wife) and two nominals (the wife's child).

(88) na yu luk im nyila bulugi minti.
 DIS 2SG look 3SG.O that cow bottom
 "Hey look at that **cow's bum!**" (FM060.B: CA19yr: Conversation)

(89) jintaku man-tu i garram nyanuny waif-tu karu.
 one man-ERG 3SG.S have 3SG.DAT wife-DAT child
 "One man has **his wife's child** (with him)." (FHM059: JV11yr: Ergative bingo)

I begin with an overview of possessive constructions in Gurindji Kriol, with particular reference to attributive constructions (§6.2), followed by a description of the attributive constructions which are available in Gurindji (§6.3.1) and Kriol (§6.3.2) for expressing possession. These constructions differ in the way they are formed in Gurindji and Kriol. Gurindji uses either a dative suffix to mark the possessor phrase, or simply juxtaposes the possessor and possessed. Kriol uses a dative preposition either pre-posed or post-posed to the dependent, or again plain juxtaposition. Whether or not the languages use a dative-marked construction depends on the nominal type. Two noun classes are distinguished through the choice of marking - (i) inalienable nominals (body parts⁶⁵ in Gurindji and Kriol, and also kinship terms in Kriol), which are encoded by juxtaposition, and (ii)

⁶⁵ Here I use the term "body parts" to include actual parts of the body such as hands and feet, as well as bodily products such as tears and faeces.

alienable nominals which are marked with the dative construction. I will show that, for Gurindji Kriol, the Gurindji dative marker is clearly favoured for the expression of attributive possession (§6.4.1), and it is applied across all types of nominals including body parts and kinship terms. However juxtaposed constructions still exist in Gurindji Kriol, and I will show through a quantitative analysis that these constructions represent the remnants of the in/alienability distinction (§6.4.2).

The data for this study comes from a number of sources. Gurindji data is drawn, in part from McConvell's (1996) Gurindji Grammar, but also from my own Gurindji elicitation. Some of the Kriol data is from Sandefur (1979) and Munro's (2005) work on Kriol at Ngukurr in south-eastern Arnhem Land, and I provide additional Kriol data which I recorded at Amanbidji in the north-western Victoria River District. The bulk of data in this chapter is from Gurindji Kriol, and this data set consists of 1517 attributive possessive constructions from 40 female speakers (16 speakers: 5-16yrs, 12 speakers: 16-25yrs, 12 speakers: >26yrs). For more detail about these data sources, see §1.6.2 and §1.6.3, and more information regarding the speakers can be found in §1.6.1.

6.2 An overview of possessive constructions in Gurindji Kriol

Possession may be expressed in a number of ways in Gurindji Kriol - through *garram* (have) phrases which come from Kriol (90), locative constructions for body parts (91), and attributive constructions which form the focus of this study, as in (88), (89) above and (92) below.

(90) **yu garram langa** wansaid *wankaj*.
 2SG have ear side bad
 "You can't hear out of your ear on that side." (FM031.C: JG43yr: Conversation)

(91) det *jinek-tu* i=m bait-im **marluka leg-ta**.
 the snake-ERG 3SG=NF bite-TRN **old.man leg-LOC**
 "The snake, it bites the old man on the leg."
 (FHM060: RR23yr: Locative pictures)

- (92) *wartarra* *yu* *bin* *kirt* *det* ***ngakparn-ku*** ***hawuj***.
 goodness 2SG NF break the **frog-DAT** **home**
 "Goodness me you broke the frog's home (the bottle)."
 (FM054.C: CA19yr: Frog story)

Attributive possession can be expressed using a number of different constructions in Gurindji Kriol. These constructions consist of a head which is the possessed entity and a dependent which is the possessor. The possessor may be a nominal or a pronoun, and the relationship between the head and dependent may be indicated through a dative marker suffixed to the dependent, or the juxtaposition of the two components of the possessive phrase. The following excerpt introduces some of these structures. The possessive forms are bolded. In (a) two noun phrases are related through a dative-marked dependent. These constructions are configurationally similar to English, though English uses a genitive clitic. The second sentence contains a Gurindji dative pronoun *nyanuny* (3SG.DAT) which precedes the head *ngakparn* (frog). In (c) a Kriol accusative pronoun is juxtaposed to the head, *neim* (name). In all of these examples, the possessor precedes the possessed which is the main order found in Gurindji Kriol.

- (93) (FM052.A: SS18yr: Frog story)

- (a) LD *an* *Shadow*, *bin* *jidan* ***LD-tu*** ***rum-ta***.
 NAMEand NAME NF sit name-DAT room-LOC
 "LD and Shadow were sitting in **LD's room**."
- (b) *luk-in-at-karra* *nyanuny* ***ngakparn*** *nganta* *botl-ta* *insaid*.
 look-CONT-at-CONT **3SG.DAT** **frog** DOUBT bottle-LOC inside
 "They were looking at **his frog** who seems to be inside a bottle."
- (c) "ai *laik-im* *dij* *ngakparn* ***im*** ***neim*** 'genga'.
 1SG.s like-TRN this frog **3SG.O** **name** mate
 "I like this frog, **its name** is 'mate'."

These three examples do not represent the full range of attributive constructions which exists in Gurindji Kriol. Between Gurindji and Kriol, there are a number of different structures available to Gurindji Kriol. The table below summarises these constructions and the forms that are found in Gurindji Kriol and its source languages. The possessive

construction in (89), (92) and (93)(a) would be classified as A1 types, (89) and (93)(b) A2 types, and (88) and (93)(c) B2 constructions. The following sections contain discussions of the types of structures found in Gurindji (§6.3.1), Kriol (§6.3.2), and of course Gurindji Kriol (§6.4).

Figure 19 *Attributive structures in Gurindji Kriol and its source languages*

Type	Name	Construction ⁶⁶	Language
A1	Dative Marked Constructions	(1) NP-DAT/-BO + NP _{head}	Gurindji Kriol (West) Gurindji Kriol
A2		(3) PRONOUN.DAT+NP _{head}	Gurindji Gurindji Kriol
A3		(4) POSS.PRONOUN+(NP _{head})	Kriol (only 1SG)
B1	Juxtaposed Constructions	(5) NP+NP _{head} (6) CAT-PRO _i (NP _i) NP	Kriol Gurindji Kriol Gurindji
B2		(7) Pro+NP _{head}	Kriol Gurindji Kriol
C1		(8) NP _{head} +blanga+NP	Kriol Gurindji Kriol (marginal)
C2	Prepositional Constructions	(9) NP _{head} +blanga+Pro	Kriol Gurindji Kriol (marginal)
C3		(10) blanga+NP+NP _{head}	Kriol
C4		(11) blanga+Pro+NP _{head}	Kriol

⁶⁶ Word order in the constructions is relatively fixed for Gurindji Kriol and Kriol, but relatively free for Gurindji possessive constructions.

6.3 Attributive possessive constructions in Gurindji Kriol's source languages

6.3.1 Gurindji

Like most Australian languages, Gurindji distinguishes relationships between entities using two distinct possessive constructions (McConvell, 1996, p. 92-94). The first type of possession marks *inalienable* relationships, "an indissoluble connection between two entities" (Chappell & McGregor, 1995, p. 4). Cross-linguistically these part-whole relationships involve inherent or unchangeable relationships between the possessor and possessed, such as the relationship between animate entities and their body parts, kin relationships, spatial relations and closely associated objects such as tools. While inalienable constructions mark an intrinsic relationship between two entities, distance and free association is represented in *alienable* structures. Grammatically there is a typological tendency for alienable nouns (either the head or possessor) to be marked, often morphologically, and inalienable nouns to be unmarked (Heine, 1997, p. 172). This marking distinction is common in Australian languages (Dixon, 1980, p. 293; Nichols, 1992, p. 118), and Gurindji is no exception.

Alienability in Gurindji is expressed by a possessor phrase consisting of a head and a dependent dative-marked nominal, which encodes the role of the possessor, as in (94). Possessors may also be expressed using a pronoun from the set of dative pronouns (95). Note also that in (95) the whole possessor phrase is cross-referenced by a nominative pronominal clitic marked on the catalyst element (see §A1.2.1).

(94) *kartipa-wu yumi kula-n kalp man-ni ..* (A1)
whitefella-DAT law NEG-2SG.S catch get-PST.PER
 "You haven't caught up with **European law**."

(95) *wanka-wankaj ngu-lu₁ nyawa-ma [yarrularn-ma ngantipany]₁.* (A2)
 bad-REDUP CAT-3PL.S this-DIS **young-DIS** **1PLEX.DAT**.
 "**Our young people** are no good." (McConvell, 1996, p. 114-15)

Inalienable possessive constructions in Gurindji are morphologically unmarked. Where the possessor is dative-marked in alienable possessive constructions, it is encoded by an unmarked nominal or a pronoun clitic in inalienable structures. Typically body parts (including products of bodily functions) are the main entities inalienably possessed, however shadows are also inalienable nouns. Interestingly, though the nominal *yini* (name) is inalienable in a number of neighbouring languages such as Warlpiri, it is an alienable noun in Gurindji (McConvell, 1996, p. 93). The status of this noun will become relevant in §6.4.4. In (96), the possessor is an unmarked nominal *ngumpit* (man), and in (97) the possessor is a reflexive pronominal clitic, *-nyunu*. Note that the 3SG pronoun clitics in (96) have no phonetic realisation, and the object clitic only cross-references the possessor, not the whole possessor phrase, as is in the case in alienable possessive constructions.

- (96) *wartan* *paya-rni* *ngu-∅-∅₁* *ngumpit₁* *warlaku-lu.* (B1)
hand bite-PST.PER CAT-3SG.S-3SG.O **man** dog-ERG
 "The dog bit the **man's hand**." (FHM146: VD: Ergative cards)

- (97) *waj-karra* *ngu-nyunu* *wuya-rni* *mila.* (B1)
 throw-CONT CAT-REFLX throw-PST.PER **eye**
 "[The Dreaming] threw **his own eyes** away." (McConvell, 1996, p. 113)

The pairs of constructions in (94) and (96), and (95) and (97) contrast in their use of the dative marker, and in doing so construct a different relationship between the head and dependent of the possessive construction. In (94) the possessor and possessed are in a hierarchical relationship with *kartipa* (whitefella) a dependent of *yumi* (law), with the whole phrase a verbal argument which is cross-referenced as a single entity by a zero pronoun object clitic. In contrast, in (96) *ngumpit* (man) and *wartan* (hand) are in accusative case and could be analysed as both being dependents of the verb "bite". In this construction, only the possessor is cross-referenced by a pronoun clitic. (95) and (97) are similar, with the possessor in (97) expressed only by a pronoun clitic *-nyunu* (REFLX), and a zero pronoun subject clitic.

These pairs of constructions can be analysed in terms of *external possession*. Tsunoda (1995), amongst others, argues that inalienability can be marked at the clause level through a process of possessor raising whereby the possessor encodes an argument. For example, in English, only body parts and some closely associated objects such as clothes may exist in a locative construction which marks inalienable possession. Compare (98) with (99):

(98) John kissed Mary's lips.

(99) John kissed **Mary on the lips**. (Tsunoda, 1995, p. 590)

In (98), the possessor *Mary* is expressed as dependent of the noun *lip*, but in (99) *Mary* has been structurally 'raised' to become a dependent of the verb *kissed*. Though (98) and (99) are structurally related, there is some doubt about the meaning equivalence of these constructions (Blake, 1984, p. 438; 1990, p. 102; Ultan, 1963, p. 30). The act of kissing in (99) seems to affect Mary more intimately than in (98), as the lips seem somewhat disembodied from Mary in (98). This phenomenon is variably called external possession (Payne & Barshi, 1999), possessor raising (Munro & Gordon, 1982, p. 95), possessor ascension (Chappell & McGregor, 1995) or possessor specification (Heine, 1997, p. 167), depending on the theoretical paradigm adopted, and whether a derivational process, such as transformation, is assumed, or whether the resultant structure is merely described.

It has been claimed that many Australian languages also distinguish alienability clausally by possessor raising. Blake (1984, p. 445) frames this process within Relational Grammar as a movement from an initial stratum to a realised second stratum. He uses examples from Kalkatungu to demonstrate this ascension. Like Gurindji, the possessor and head are unmarked and in apposition. Blake suggests that the possessor is a dependent of the head underlyingly, and it raises out of this possessor phrase to become a dependent of the head of the clause, which is the verb. It is not the aim of this chapter to provide syntactic argumentation for external possession in Gurindji. However by analogy, I analyse Gurindji inalienable possessive constructions similarly and suggest that the bound pronoun is a dependent of the verb, not the head of the possessor phrase, in (96) for example. The possessed nominal is also a dependent of the verb, juxtaposed to the

possessor. Interestingly, Jaru, a Ngumpin language closely related to Gurindji and Warlpiri, displays parallel possessive structures to Kalkatungu, however Tsunoda is "not certain whether such an analysis [possessor ascension] is adequate for Djaru" (1995, p. 599). No reasons are given for this doubt, nor is an alternative explanation provided. The analysis of possessor ascension will become important later on in examining the continuation of the Gurindji in/alienability distinction in the derived mixed language.

The range of possessive constructions in Gurindji is summarised below in Figure 20.

Figure 20 *Attributive possessive constructions in Gurindji*

Type	Name	Construction	Example
A1	Dative Marked Constructions	NP-DAT NP _{head}	(94)
A2	(Alienable)	Pro-DAT NP _{head}	(95)
B1	Juxtaposition Constructions (Inalienable)	CAT-Pro _i (NP _i) NP _{head}	(97) (96)

6.3.2 Kriol

The most common attributive possessive construction in Kriol involves a head noun followed by a prepositional phrase encoding the possessor as in (100) (C1) (Sandefur, 1979). A number of different preposition forms are used in Kriol depending on the region, including *bla(nga)*, *fo* (Ngukurr), *bo* (Timber Creek), or *bi* (Jilkminggan). The position of the head and dependent nouns is also somewhat variable, as demonstrated in (101) where the PP, which encodes the possessor, precedes the head. Other variations on the position of the dative preposition also exist in other parts of the Top End. In the Kimberley, another form "John bla buk" (John's book) (A1) is used, where the Kriol preposition is postposed to the possessor. Hudson (1983, p. 71-72) claims that this structure is due to the substrate influences from the surrounding traditional languages. A similar form is used in the Kriol spoken in the Timber Creek area north of Kalkaringi (see map) (Charola, 2002, p. 8), as is shown in (102). Charola also claims that this form is due to the substrate influence of Ngumpin languages, such as Gurindji, which mark

possession using a dative marker on the possessor, as shown above. Indeed it is reasonable to analyse *bo* as a bound morpheme, as in the A1 type.

- (100) bat ola [hos] [bla mindubala] bla werk la bush ... (C1)
 but all horsePREP 1DUEX PREP work PREP bush
 "But all of **our horses** for working are in the bush ..." (Munro, 2005, p. 181)

- (101) ola boi bin stil-im [bi det olgamen] [motika] (C2)
 all boy PST steal-TRN PREP the old.woman car
 "All of the boys stole the old woman's car." (FHM167: JD23yr: Elicitation)

- (102) det kengkaru im lik-im-bat det kamel-bo iya-s. (A1)
 the kangaroo 3SG lick-TRN-CONT the camel-DAT ear-PL
 "The kangaroo licks **the camel's ears**." (FHM096: SY18yr: Locative pictures)

Possession may also be expressed through the juxtaposition of the possessor and possessed. The possessor may take the form of a noun, (103) or an accusative pronoun⁶⁷, (104) and (105).

- (103) det kamel im lik-im-bat det kengkaru hed. (B1)
 the camel 3SG lick-TRN-CONT the kangaroo head
 "The camel licks **the kangaroo's head**." (FHM096: SY18yr: Locative pictures)

- (104) dis lidl gel get kat la glas an im bulad kom-at (B2)
 this little girl get cut PREP glass and 3SG blood come-out
 "This little girl gets cut from the glass and **her blood** comes out."
 (FHM096: CN35yr: Locative pictures)

- (105) im gu tok la im hasben. (B2)
 3SG go talk PREP 3SG husband
 "She goes and talks to **her husband**." (FHM096: SY18yr: Locative pictures)

⁶⁷ Note that nominative pronoun forms are never found, even where the possessive construction is a subject.

Kriol does not have a separate set of possessive pronouns, the exception being the first singular pronoun *mai(n)* (<my/mine). Following Sandefur (1979, p. 89), Munro (2005, p. 180) suggests that pronoun possessors express possession through the juxtaposition of the *blanga* preposition, as there are no independent possessive pronoun forms (except *main*).

If the possessor is first person, then *main*, or *mai*, precedes the possessed nominal. There are no other independent possessive pronouns. Where the possessed is a kin term, body part or something owned by the possessor apposition of the possessed and possessor, whether as nominals or pronouns, is the most commonly used possessive construction.

Alternatively, *main hasben* (my husband) and *im hasben* (her husband) could be equivalent forms, where both pronouns express possession, and *im hasben* is not simply a case of juxtaposition. However this analysis would require positing a class of possessive pronouns and almost complete syncretism across accusative and possessive pronouns. Thus it is more likely that *main* is an exceptional 1SG possessive form, with unmarked accusative pronouns encoding possessors.

Munro (2005, p. 180-82) observes that Kriol possessive constructions distinguish body parts and kinship terms from other nouns, and she claims that this distinction is derived from Kriol's substrate languages, for example Alawa, Marra and Warndarrang (Marran) and Ngalakan and Ngandi (Gunwinyguan) (Munro, 2005, p. 177). Alienable nouns require either a post-posed or preposed dative preposition to express the relationship between the head and the dependent. On the other hand, the simple juxtaposition of pro/nouns and nouns (A1 and B1) is used for body part possession and kin relationships, as shown in (103), (104) (body parts) and (105) (kinship). Note that this collection of inalienable nominals differs from Gurindji where kinship relations are treated in the same way as alienable possessions. Interestingly, Kriol also uses this construction for the noun "home", for example *Shila kemp* (Sheila's home). However this noun also behaves differently in other constructions such as goal constructions, as will be shown in §8.3.2. In goal constructions "home" is also unmarked where other goals are preceded by the preposition *langa*. Due to the more general lack of marking associated with "home", I

consider this nominal to be a bit of a red herring in this situation and do not analyse this noun as inalienable.

The range of attributive possessive constructions in Kriol is given in Figure 21.

Figure 21 *Attributive possessive constructions in Kriol*

NB 'blanga' in Figure 3 may be expressed as 'blanga', 'bla', 'bi', *bo* or *fo* depending on the dialect. 'Bo' and 'fo' are considered more acrolectal versions of 'blanga'.

Type	Name	Construction	Example
A1	Dative Marked Constructions	NP-BO+NP _{head}	(102)
A3		possessivePro + NP	<i>main hasben</i>
B1	Juxtaposition Constructions	NP+NP _{head}	(103)
B2		Pro+NP _{head}	(104), (105)
C1	Prepositional Constructions	NP _{head} + <i>blanga</i> +NP/Pro	(100)
C2		<i>blanga</i> +NP/Pro+NP _{head}	(101)

6.4 Attributive possessive constructions and alienability in Gurindji Kriol

6.4.1 The range of attributive possessive constructions

Most of the attributive constructions found in Gurindji and Kriol are also used in Gurindji Kriol. However the extent to which each construction is used, and the degree to which factors such as alienability affect the use of constructions differs from the source languages. An additional influencing factor in the use of possessive constructions in Gurindji Kriol is the age of the speaker. Figure 22 shows the range of possessive constructions available in Gurindji Kriol. Each type is then discussed in turn - constructions where the Kriol *bo* preposition is preposed to the possessor (C1) §6.4.1.1, where the possessor and possessed are both nominals (A1 and B1) §6.4.1.2, and where the possessor is a pronoun (A2 and B2) §6.4.1.3. The effect on alienability and the age of the speaker will be discussed in §6.4.2.

The range of possessive constructions available in Gurindji Kriol is summarised in Figure 22.

Figure 22 *Attributive possessive constructions in Gurindji Kriol*

	Type	Construction	Example
A1	Dative Marked Constructions	NP-DAT NP _{head}	<i>warlaku-yu minti</i> dog-DAT bottom 'dog's bottom'
A2		Pro _{DAT} NP _{head}	<i>nyanuny warlaku</i> 3SG.DAT dog 'his dog'
B1	Juxtaposed Constructions	NP-∅ NP _{head}	<i>kengkuru majul</i> kangkuru stomach 'kangaroo's stomach'
B2		Pro _{ACC} NP _{head}	<i>im wartan</i> 3SG hand 'his hand'
E1	Prepositional Possession Constructions	NP _{head} blanga NP ⁶⁸	<i>kimbi im bo Leyton</i> nappy 3SG PREP Leyton 'Leyton's nappy'

6.4.1.1 Prepositional constructions (E1)

Possessive constructions which use the Kriol *bo* form only occur rarely in Gurindji Kriol. The construction where *bo* is postposed to the possessor, perhaps even as a suffix in a pattern very similar to the dative marker in Gurindji, is never found here. This is interesting given that this is the dominant construction found in the Kriol north of Kalkaringi (as shown by (102) in §6.3.2), and indeed Gurindji Kriol speakers use this form when they are speaking Kriol to other Westside-Kriol speakers in, for example Katherine and Timber Creek (see map). In this respect, this construction is in their repertoire. The only Kriol construction used in Gurindji Kriol is C1 where *bo* is found preposed to the possessor. And even then this construction is not used commonly. Only 10 examples (0.5%) of this type of construction appear in the data. An example is shown in (106). Here two mothers are conversing by a water hole. Their children have shed their

⁶⁸ Note that, of the range of possessive constructions found in Kriol, this is the only construction which is used in Gurindji Kriol.

nappies to go swimming, and the mothers are trying to figure out which mother is responsible for each nappy and the disposal of them. The second example is from a conversation between two young adults who are fishing and arguing about which hook belongs with which fishing reel (107).

(106) an *kura-yawung* **kimbi** **im bo LD** jarran (C1)
 and **faeces-PROP** **nappy** **3SG.OPREP NAME** that.one
 "And **the poo-y nappy, it's Leyton's.**" (FM034.A: TJ22yr: Conversation)

(107) *yapakayi-wan* **huk bo nyawa** i gat nojing *wartiti.* (C1)
 small-NOM **hook PREP this** 3SG.S has nothing goodness
 "Ah come on, **the small hook is for this one** (fishing line), it hasn't got one."
 (FM041.C: CA19yr: Conversation)

It is not clear why instances of this construction are so scarce in the data, and whether they have a particular restricted function in Gurindji Kriol, or represent a code-switch into Kriol. The only two examples of a possessive relationship between two *inanimate* entities use this structure. Other languages also mark this relationship using a different structure, for instance, English uses a possessive phrase "foot of the hill" or "key for the room". It is not obvious from the available Gurindji or Kriol data whether a different structure is used for inanimate possessive relationships, and indeed the other examples of the C1 construction involve an animate and inanimate relationship, for example (106). Another possibility may be that this Kriol construction is used when the possession construction is expressed as the main predicate of the clause, which is the case for both of the examples above. Nonetheless, this construction, though marginal, is a part of the variation of possessive constructions found in the Gurindji Kriol language system. As will be discussed in §10.3, variation in Gurindji Kriol has a number of sources. For example, this variant could be internal to Gurindji Kriol, or left-over from the competition between the Kriol and Gurindji forms. Alternatively it could be an external variant, present as a result of continuing contact with Kriol. Kriol is still a part of the linguistic environment of Gurindji Kriol speakers (§2.2.4), with these structures still available to speakers to an extent.

- (109) *kajirri-ngku* *pirrk-karra* **kengkaru majul.** (B1)
 woman-ERG pull.out-CONT **kangaroo stomach**
 "The woman is pulling out the **kangaroo's guts.**"
 (FHM038: CE25yr: Ergative bingo)
- (110) det *warlaku* i=m luk langa det **bi hawuj-ta.** (B1)
 the dog 3SG.S-NF look PREP the **bee home-LOC**
 "The dog looked at the **bee hive.**" (FHM167: KP16yr: Frog story)
- (111) *kajirri-ngku* i=m kat-im *jawurt* **kengkaru-yu.** (A1)
 woman-ERG 3SG.S=NF cut-TRN **tail kangaroo-DAT**
 "The old woman chopped off the **kangaroo's tail.**"
 (FHM143: LS20yr: Ergative bingo)
- (112) an *jinek-tu* bait-im det *karu-yu* **dedi** (A1)
 and snake-ERG bite-TRN the **child-DAT father**
 "And the snake bites the **child's father.**" (FM031.C: AC11yr: Locative pictures)
- (113) *trajij* ai garra put-im-an bo *ngayiny* bebi **Nikita karu.** (B1)
 trousers 1SG.S MOD put-TRN-on PREP 1SG.DAT baby NAME **child**
 "I've got to put the trousers on my baby, **Nikita's child.**"
 (FM053.A: SS18yr: Conversation)

6.4.1.3 Pro_{DAT} NP (A2) versus Pro_{ACC} NP (B2) constructions

This section compares the use of Gurindji-derived dative pronouns with the use of Kriol-derived accusative pronouns in Gurindji Kriol attributive possessive constructions. These two categories are functionally equivalent in this structure because they are both used to index the possessor in a relationship of ownership. The dative pronouns are also found elsewhere as indirect objects and in benefactive and goal constructions. The Gurindji pronominal clitics have disappeared completely from Gurindji Kriol, and are therefore not found in these constructions. Emphatic pronouns which are derived from Gurindji free pronouns also exist, but these belong to the word class of nominal (§A1.6.2), and are never found in Gurindji Kriol possessive constructions, at any rate. §A1.8 contains a discussion of the Gurindji Kriol pronoun paradigm.

Like the nominal possessive constructions, both accusative and dative pronouns seem to be found in a random distribution, however the analysis presented in the following section will demonstrate that age and the categories of alienability in Gurindji and Kriol motivate the patterns described.

6.4.2 Marking alienability in Gurindji Kriol

The presence or absence of a dative marker, whether encoded by case morphology or a preposition, is used to differentiate two different classes of nouns in Gurindji and Kriol - alienable and inalienable nouns. As was shown in §6.3.1, all Gurindji possessive constructions involving body part and shadow nominals are found without a dative marker. In Kriol, the unmarked set includes body parts, and also kinship nouns (§6.3.2). In Gurindji Kriol, both dative marked and unmarked constructions are used across all of these categories, however dative marking has become the dominant pattern found across all categories in both the nominal and pronoun sets. The aim of this section is to determine what motivates the non-use of the dative marker and, in particular, whether the inalienable categories from Gurindji and Kriol, still affect the appearance of the dative marker or dative pronoun.

In order to determine which factors motivate the non/appearance of the dative marking, I use a multilevel logistic regression model with a binomial link function available in the statistical package *R* (Pinheiro & Bates, 2000)⁷¹. I coded all instances of A1 and B1 nominal constructions, and A2 and B2 pronoun constructions for the inalienable categories found in Gurindji and Kriol: body parts and kinship. Thus the dependent variable is the use of the dative marker, which is tested against the independent variables

⁷¹ Other regression models are available in other statistical packages, such as *Goldvarb* and its various instantiations, which were developed by David Sankoff specifically for the purpose of variationist analysis. Here I follow Carmel O'Shannessy's (2006) methodology used in her study of the acquisition of ergative marking by Warlpiri children. In a series of studies, O'Shannessy tests the effect of a number of variables against the use of the ergative marker in a Warlpiri or Light Warlpiri clause. This method of statistical analysis is also appropriate for my research questions because I am investigating the distribution of a dependent variable which is binary in nature, and because my data is heterogenous, i.e. it differs in the numbers of tokens that are contributed by each speaker. Moreover the primary unit, the token, is not closely equivalent given the nature of spoken discourse. This regression model is suitable for this type of data set because individual speakers and tokens can be computed as random effects.

- whether the head of the possessive construction is a body part or a kinship term. Age was also tested, and consisted of three categories (5-15yrs, 16-25yrs and 26+yrs). It was expected that age may have some influence if the inalienability categories were still active in Gurindji Kriol. For example, older speakers may be more likely to mark the Gurindji distinction if it is present because of their active command of Gurindji. Tokens were also coded for whether the dependent was a nominal or pronoun in order to examine any potential differences between the use of dative marking across these word classes. Finally speaker identity was included as a random variable to account for potential skewing which might result from the uneven number of tokens contributed by each speaker. The *neim* nominals were also originally included, but the numbers were so small that they were not included in the final statistical analysis. However they are discussed in §6.4.4.

Dependent variable:	dative marker (+/- DAT is present)
Independent variables:	kinship term (+/- kinship term is used)
	body part (+/- body part term is used)
	age (3 categories B=5-15yr, C=16-25yr, D=26+yr)
	nominal (+/- nominal, where -nominal = +pronoun)
Random variables:	speaker (one of 40 speakers)

The percentage of nominals with dative marking according to each factor and each age group is given in Figure 23. A full version of the statistical output can be found in §A5.

Figure 23 Distribution of NP(-DAT) NP tokens according to tested variables

B (6-15 YR OLDS)

		BODY	%	KINSHIP	%	OTHER	%
		PARTS					
Nominals	with DAT	67	94.5	6	100	27	90
	without DAT	4	5.5	0	0	3	10
	Total	71		6		30	
Pronouns	with DAT	8	73	78	91.5	62	100
	without DAT	3	27	7	8.5	0	0
	Total	11		85		62	

C (16-25 YR OLDS)

		BODY	%	KINSHIP	%	OTHER	%
		PARTS					
Nominals	with DAT	109	79	9	81	42	85.5
	without DAT	29	21	2	19	7	14.5
	Total	138		11		49	
Pronouns	with DAT	32	49	300	95	281	98.5
	without DAT	33	51	16	5	4	1.5
	Total	65		316		285	

D (26+ YRS OLD)

		BODY	%	KINSHIP	%	OTHER	%
		PARTS					
Nominals	with DAT	44	55	5	50	15	79
	without DAT	36	45	5	50	4	21
	Total	80		10		19	
Pronouns	with DAT	8	38	90	99	90	92
	without DAT	13	62	1	1	8	8
	Total	21		91		98	
TOTAL	with DAT	268	70	488	94	517	95
	without DAT	118	30	31	6	26	5
	Total	386		519		543	

Figure 23 gives the distribution of dative marking across the age groups and word class type according to whether they are body part nominals, kinship terms or any other type of nominal (not including *neim* nominals). The only factors which are significant are age group 26+ years ($p < 0.01$) and body parts ($p < 0.001$). These results indicate that the oldest age use dative marking significantly less than the two younger age groups, which pattern more like each other. Indeed the 6-15 year olds use the dative marker 93.5% across the board, 16-25 year olds use it 89%, whereas the 26+ year olds use it 79.5%. Secondly the dative marker is used significantly less in possessive constructions involving body parts. Across the age groups the dative marker is used in 70% of constructions involving body part nominals, whereas a dative marker is found in possessive constructions involving kinship and other nominals 94% and 95% of the time respectively. Whether the dependent was a pronoun or a nominal, and whether the possessed was a kinship term or not did not affect the distribution of the dative marker significantly.

Two scenarios may account for these results. First, it could be that pressure from both Gurindji and Kriol categories of inalienability acted on Gurindji Kriol to produce the observed pattern. This analysis would account for the fact that only body parts significantly affect the application of the dative marker. Both Gurindji and Kriol use unmarked constructions to relate body parts to their owners, whereas only Kriol marks kinship terms inalienably. Thus the inalienable status of body part nominals is reinforced by both languages and this may explain why the dative marker appears significantly less in body part possessive constructions and not in kinship constructions. However if the effect is reinforced by both Gurindji and Kriol, then the age results are curious. If both Gurindji and Kriol affect the distribution of dative marking in body part possessives, then this effect should be noted equally across the board, as all age groups are competent Kriol speakers. Instead the oldest age group use the dative marker significantly less. Thus a different scenario may be proposed. If the remains of only the Gurindji inalienable distinction does exist, it would be more likely to be present in the utterances of older speakers of Gurindji Kriol who also have access to Gurindji either as speakers or through a more thorough passive knowledge than younger speakers. This age distinction, then, exemplifies the diversity in sources of variation. Variation in Gurindji Kriol is both

internal to the mixed language, and also the result of continuing contact with its source languages. The remnants of a category of inalienable nominals in the speech of older speakers could be an external influence, a result of ongoing contact with the Gurindji system. In which case, persistence of the in/alienability distinction is influenced by Gurindji and not by Kriol.

Finally, in some respects the categories of alienability are continuing to be maintained. Gurindji Kriol distinguishes two classes of nominals - an alienable group which uses dative marking categorically, and an inalienable group where dative marking is optional. However this distinction is being lost gradually as can be seen across the age groups, where the youngest age group use dative marking almost categorically in all possessive constructions (93.5%). Why this distinction between alienable and inalienable nominals is being lost is not entirely clear given that Kriol also makes similar distinctions. The loss is perhaps a result of the general processes of contact, but certainly cannot be attributed to a Kriol influence.

6.4.3 Alienability and possession in other contact situations

The loss of a distinction between alienable and inalienable nominals has been observed elsewhere in Australian post-colonial contact varieties. In all of these cases, inalienable nominals have been subsumed into the same system of possessive marking as the alienable nominals. Meakins and O'Shannessy (2005) describe a single system of marking for possessive constructions in Light Warlpiri, which reflects that found in Gurindji Kriol. In Warlpiri, part-whole relations including body parts and names (see §6.4.4) are encoded through juxtaposition, and alienable nominals, through explicit marking. This system is similar to Gurindji (§6.3.1), except that a special possessive suffix is used in Warlpiri, where the dative marks alienable possession in Gurindji. Nonetheless in Light Warlpiri, possessive marking now marks all nominals such that no distinction between alienable and inalienable nominals is made. It must be noted, however, that though possessive marking is the dominant system of expressing possession, unmarked juxtaposed nominals can be found. These juxtaposed constructions

always express part-whole relations, suggesting that, like Gurindji Kriol, the remains of an in/alienable distinction is present.

Disbray and Simpson (2005) describe a similar scenario for Wumpurrarni English, a creolised variety of English spoken in Tennant Creek (see map). Wumpurrarni English retains some inflectional morphology from one of its substrate languages, Warumungu, including a possessive marker. In Warumungu, alienable and inalienable nominals are distinguished in possessive constructions by the use of the possessive marker. Alienable nominals are related through the possessive marker, and inalienable nominals are simply juxtaposed. Again this is a similar pattern to that of Gurindji and also Warlpiri. In Wumpurrarni English a number of forms and structures are used for expressing possessive relations, including the Warumungu possessive marker. However, in Wumpurrarni English, the possessive marker has been extended to mark previously inalienable categories of nominals such as body parts, such that a distinction is no longer maintained (Disbray & Simpson, 2005, p. 77-80).

The erosion of the alienable-inalienable distinction has also been described for three traditional Australian languages - Aranbana, Paakantyi and Areyonga Teenage Pitjantjatjara - as a process of language decay. First Hercus (2005) attributes this structural change in Arabana (northern South Australia) and Paakantyi (Darling River, New South Wales) to contact with English. In Arabana, inalienable and alienable nominals continue to be differentiated in possessive constructions which contain two nominals, however this distinction is not being maintained in constructions which relate possessive pronouns to nominals. Hercus (2005, p. 31) finds that in verb-less clauses consisting of a possessive construction with two nominals, possession involving inalienable nominals is expressed through juxtaposition, whereas a genitive marker encodes the ownership of alienable nominals. However, in possessive constructions, where a pronoun is found as the possessor, the genitive form is always used regardless of alienability categories. In verbal clauses, possessive constructions consisting of both noun-noun and pronoun-noun use a genitive marker or genitive pronoun to relate the two entities, where an inalienable-alienable distinction was marked in more conservative

varieties of the language (2005, p. 31). Hercus also gives a similar account of in/alienability in Paakantyi, and claims that the change in both languages is an outcome of contact with English, which does not distinguish inalienable nominals in attributive possessive constructions. In the case of Areyonga Teenage Pitjantjatjara, both alienable and inalienable nominals are being marked genitive, where inalienables were previously unmarked (Langlois, 2004, p. 84).

6.4.4 Marking *neim* (name) in Gurindji Kriol

The remaining nominals which were not accounted for within the Gurindji Kriol survey of attributive possessive constructions presented above are *neim* (name) nominals. *Neim* is an alienable nominal in both Gurindji and Kriol in that it takes a dative-marked dependent in possessive constructions, However this nominal is inalienable in Warlpiri. Interestingly, of the 15 examples of "name" in a possessive relationship with another nominal, all appeared in juxtaposition constructions, as in (118) and (119).

(118) an *nyununy* **kaku** **neim** na
 and 2SG.DAT **FF** **name** DIS
 "And your **grandfather's name** now?" (FM045.C: CE25yr: Conversation)

(119) wat **im** **neim** *nyanuny* mami *nyawa?*
 what 3SG.O **name** 3SG.DAT mother this
 "His mother, what's **her name**, his mother, this one."
 (FM031.A: CE25yr: Conversation)

Dative markers were never found in these constructions. There are a number of possible explanations for the dominant use of juxtaposed constructions for marking the ownership of *neim*. To begin with, the use of this structure could be the idiosyncratic result of repetitive school practices, where ESL children are constantly asked to name objects, and have great difficulties with the possessive English *-s*⁷². It may also be an influence from Warlpiri where *yirdi* (name), occurs in an inalienable structure. Warlpiri is the next most

⁷² This difficulty is curious given that the English *-s* is congruent to the Gurindji dative marker, in that they are both dependent marking forms which are found as suffixes. Nonetheless teachers report to me that they spend a lot of time getting children to use this form in English.

dominant language in the region after Gurindji Kriol, so it is possible that aspects of Warlpiri structure have seeped into Gurindji Kriol.

6.5 Conclusion

The outcome of contact and competition between the Gurindji dative case-marker and Kriol dative preposition is two-fold. First, the Gurindji form for encoding possession is clearly the preferred marker, with the Kriol preposition only rarely found in possessive constructions. Secondly, dative marking on nominals is used more often than it is not. Similarly, dative pronouns are used more often than accusative pronouns. However, the Gurindji distribution of dative marking and zero marking according to nominal type has not directly mapped onto Gurindji Kriol. The function of the dative marker in Gurindji extends only to marking alienable nominals, with a class of inalienable nominals distinguished by the lack of marking on the possessor. In Gurindji Kriol, however, the distinction between these classes of nominals is barely registered. Some body part nominals occur without dative marking, however they are losing their status as a distinct class of nominals with younger speakers only occasionally using an unmarked possessor. Thus the use of Gurindji-derived dative marking in Gurindji-Kriol possessive constructions represents the first result of competition in the domains of nominal marking - the maintenance of form with an alteration of functional distribution.

7. TOPOLOGICAL RELATIONS IN GURINDJI KRIOL

7.1 Introduction

In the previous chapter, contact and competition between Gurindji and Kriol forms of marking possession were shown to result in the dominance of the Gurindji form, coupled with a change in the distribution of marking. This chapter demonstrates another result of the interaction between functional equivalents in Gurindji Kriol: the prevalence of the Gurindji form coupled with the emergence of a new double-marked form. This outcome will be examined within the functional domain of *topological relations* in Gurindji Kriol, and, more specifically, the relative distribution of general spatial relators: the locative case suffix, *-ngka/-ta*⁷³, which is derived from Gurindji and the locative preposition, *langa*⁷⁴, which comes from Kriol. By topological relations I refer to the static relationship between a figure which is located with respect to a ground (Levinson & Wilkins, 2006, p. 5). For example, in (120) the spatial configuration of the figure, *mukmuk* (owl) and ground, *karnti* (tree) is indicated through the locative case suffix *-ngka*.

- (120) *nyila-ngku karu-ngku i=m karrap-karra mukmuk karnti-ngka.*
 that-ERG child-ERG 3SG.S=NF look.at-CONT owl tree-LOC
 "That kid is looking at **the owl in the tree.**" (FHM162: RX19yr : Frog story)

⁷³ For more information about locative allomorphy in Gurindji Kriol, refer to §A1.6.3.1.3.

⁷⁴ This preposition also has a short form *la* however I will refer to it using the full form.

The locative case suffix is the dominant means of marking location in Gurindji Kriol. However younger speakers are beginning to favour a double-marking strategy which involves the use of both the locative case marker and the locative preposition. Indeed age appears to be the main factor in the choice of *langa*, either alone or in a double-marked construction, and this preposition corresponds to a cluster of other age-related Kriol nominal features including the presence of a determiner and the position of the locative phrase in the clause. In this chapter, I suggest that this cluster of Kriol features is a symptom of the spread of Kriol grammar from the Gurindji Kriol verbal grammar into the noun phrase structure. These results are discussed in §6.4.2. Descriptions of the distribution of locative marking in topological relations in Gurindji (§6.3.1), Kriol (§6.3.2) and Gurindji Kriol (§7.4) precede this analysis. This chapter also acts as a preface for the following chapter which examines the extension of the locative case suffix into the domain of goal constructions.

As with the previous chapter, the data for this chapter comes from a number of sources including McConvell's (1996) *Gurindji Grammar*, Sandefur's (1979) *Kriol grammar*, Munro's (2005) thesis on Kriol, and finally my own work. The Gurindji Kriol data consists of 1874 tokens of locational constructions derived from 40 speakers (13 speakers - 6-15 years old, 14 speakers - 16-25 years old, and 13 speakers - 26+ years old). These utterances come from a range of language contexts including conversation and narratives, which are based on picture-prompt books, and peer elicitation activities using materials specifically designed to elicit topological relations. Further explanation of this methodology is given in §1.6.

7.2 An overview of topological relations in Gurindji Kriol

Gurindji Kriol encodes topological relations in a number of ways. For example, Gurindji Kriol has a sub-set of verbs derived from Gurindji coverbs which expresses ground information, such as the locus of the hitting, as shown in (121). Gurindji Kriol also employs adverbials which act as spatial relators, for example *walyak* (inside) in (122), and *kanyjurra* (down) in (123). Adverbial demonstratives can also be used to encode

relative location in Gurindji Kriol, with one set derived from Kriol, and another from Gurindji, (123) (see §A1.9 for more information on demonstratives).

- (121) *marluka nyila* i=m jidan binij *wumara-ngku* ***pangkily.***
 old.man that 3SG.S=NF sit finish rock-ERG **hit.head**
 "That old man was sitting there and suddenly a rock **hit him on the head.**"
 (FHM124: RS20yr: Locative pictures)
- (122) wan *karu* gon ***walyak*** **la** duwa.
 a child go **inside** **PREP** door
 "A kid goes **inside through** the door." (FHM151: JV11yr: Locative pictures)
- (123) wen yu bin *tarukap nyila-ngka ngawa-ngka* ***kanyjurra ...***
 when 2SG NF bathe **that-LOC water-LOC** **down**
 "When you swam down **there in the water** ." (FM057.C: SO39yr: Conversation)

Often these spatial relators are accompanied by more general locative markers, for example a case suffix as shown in (123), or a preposition, as in (122). These are the focus of this study.

Locative marking in Gurindji Kriol takes one of three forms. First, a locative case suffix, which is derived from Gurindji, may be found. An example of this type of construction is found below in (124). Here the location of the sleeping dog is indicated by the case marker. An adverbial *kanyjurra* (down) gives more information about where the dog is located in relation to the table. The locational preposition can also be used to mark the same relation, as in (125) where this preposition is used in an adjunct prepositional phrase which expresses the location of the dog's action. Finally, Gurindji Kriol also uses both the Gurindji-derived case suffix and the Kriol preposition together in a double-marked construction unique to the mixed language, as is shown in (126). These constructions and their sources are summarised in Figure 24.

- (124) najan *warlaku* *makin* ***tebul-ta*** ***kanyjurra.***
 another dog sleep **table-LOC** **down**
 "Another dog is sleeping **under the table.**"
 (FHM027: CA 19yr: Locative pictures)

- (125) an det *warlaku* i=m top *nyantu-rayinyj* **la** det **fens.**
 and the dog 3SG.S=NF 3SG-ALONE **PREP the fence**
 "And the dog is sitting by itself next to the fence."
 (FHM006: JC11yr: Locative pictures)
- (126) det *warlaku* *makin* **langa** det *tebul-ta* *kanyjurra.*
 the dog sleep **PREP the table-LOC down**
 "The dog is sleeping **under the table.**" (FHM004: MC11yr: Locative pictures)

Figure 24 Marking topological relations in Gurindji Kriol and its source languages

Type	Name	Construction	Language
A	Locative Marked Structure	(1) X ⁷⁵ +NP-LOC	Gurindji Gurindji Kriol
B	Prepositional Structure	(3) X+PREP+NP	Kriol Gurindji Kriol
C	Double Marked Structure	(5) X+PREP+NP-LOC	Gurindji Kriol

7.3 Topological relations in Gurindji Kriol's source languages

7.3.1 Gurindji

Like many Australian languages such as Warrwa (McGregor, 2006b, p. 125), Warlpiri (Wilkins, 2006, p. 29) and Jaminjung (Schultze-Berndt, 2006a), Gurindji uses one case marker, the locative case suffix⁷⁶, to express a broad range of figure-ground relations within the functional domain of topological relations. To begin with, it is used to mark the relative location of an entity with another entity at rest. Often these constructions occur with the "to be" inflecting verb, as in (127) where the case suffix encodes the location of the paperbark trees. The locative marker is also used to mark the place to which something has been moved, usually in conjunction with *put*-type verbs, as in (128) where the locative marks a ground nominal to indicate the final location of "the

⁷⁵ Where 'X' is part of the clause or an adjunct, as discussed in §6.3.1 for Gurindji, §6.3.2 for Kriol and §7.4.1 for Gurindji Kriol.

⁷⁶ The allomorphy of Gurindji case suffixes is more extensive than Gurindji Kriol. For more detail on the reduction of case morphology in Gurindji Kriol, see §A1.6.3.1.3.

cigarettes". The locative marker also marks the location of the object in a transitive clause. For example, in (129), "the frog" is an object of the verb "keep", and its position in the bottle is encoded by locative marking and additionally the adverbial, *walyak* (inside). Finally, it is used to encode the location of an event, as in the locational adjunct in (130), which consists of a locative-marked nominal that gives more descriptive information about the weather conditions the children are running in.

- (127) *pinka-ka karri-nyani pakarli.*
river-LOC be-PST.IM paper.bark
 "There used to be paperbark trees **at the river.**" (McConvell, 1996, p. 81)
- (128) *lulu-waji-la yuwa-ni ngu jungkart-kaji.*
sit-AGENT-LOC put-PST.PER CAT smoke-AGENT
 "She put the cigarettes **on the chair.**" (FHM098: VD: Locative pictures)
- (129) *karu-ngku ngu karrwa-rnana na ngakparn walyak murlukurn-ta.*
 child-ERG CAT keep-PRS.IM DIS **frog** **inside** **bottle-LOC**
 "The child keeps **the frog inside the bottle.**" (FHM152: ES49yr: Frog story)
- (130) *yipu-ngka ngu-lu rarrarraj ya-nana karu-walija kurrurij-jirri.*
rain-LOC CAT-3PL.S run.REDUP go-PRS.IM child-PAUC car-ALL
 "The kids are running to the car **in the rain.**" (FHM146: VD: Allative pictures)

7.3.2 Kriol

The locational preposition in Kriol has a broader range of functions than the Gurindji locative marker. It is used to encode goal constructions, which will be discussed in §8.3.2, as well as topological relations. This preposition has a number of forms including *langa* and its short form, *la*, and a *nanga/na* variety which is used in Ngukurr and further south around Tennant Creek. Only the *langa* forms are used in Kalkaringi. Like Gurindji, this locational marker can indicate the relative position of two entities in verbless or copula clauses, as in (131), and the location of an entity at the end point of an action in locative complements, as shown in (132) and (133). It can also encode the location of an ongoing activity in locative adjuncts, as seen in (134). Note that an adverb, *wansaid*

(beside), is used in conjunction with the preposition in (134) to specify the location of clause.

- (131) **im langa im kemp**
 3SG PREP 3SG home
 "He is at home." (Sandefur, 1979, p. 148)
- (132) dis wan man dat jinek im bait-im **la arm.**
 this a man the snake 3SG bite-TRN PREP arm
 "The snake bites this one man **on the arm.**"
 (FHM096: CN35yr: Locative pictures)
- (133) dis gel im put-im jumok **la jiya.**
 this girl 3SG put-TRN cigarette PREP chair
 "This girl puts the cigarettes **on the chair.**"
 (FHM096: CN35yr: Locative pictures)
- (134) det dog im jilip **wansaid la shop.**
 the dog 3SG sleep beside PREP shop
 "The dog is sleeping **beside the shop.**"
 (FHM096: SY18yr: Locative pictures)

7.4 Topological relations in Gurindji Kriol

In the formation of the mixed language, I argue that the locative markers from Gurindji and Kriol were recognised as functionally equivalent forms, that is general spatial relators which encode topological relations. Consequently, they competed to mark this function in Gurindji Kriol. As was shown in §7.2, the locative case suffix from Gurindji and the locative preposition from Kriol are both found in Gurindji Kriol. Moreover a new form of marking has emerged where both the Gurindji and Kriol forms are used in a double-marked structure. These three variants continue to compete and shape the structure of locational marking in Gurindji Kriol. The function and relative distribution of these locative markers is examined in §7.4.1. The locative case suffix surfaces as the favoured form for marking location, with the locative preposition both alone and in conjunction with the case suffix more marginal. §6.4.2 uses quantitative methods to examine the

motivations for the use of *langa*, and in particular the status of the increasingly popular double-marked construction.

7.4.1 Marking topological relations in Gurindji Kriol

There is a great deal of cross-over between Gurindji and Kriol in the functional range of locational markers in encoding topological relations. This range is also reflected in Gurindji Kriol. The additional function in Kriol of marking goal constructions will be discussed in §8.4 as an emergent function of the Gurindji-derived locative case-suffix in Gurindji Kriol. First, however, locational markers encode the relative position of one entity to another. For example (135) is a verbless clause where the dog and the table are located relative to each other using a case suffix. Locational markers also indicate the place where an entity has been moved to, and typically involve *put*-type verbs, as in (136) where the final location of the Sprite bottle is a locative complement of the verb and is marked by a preposition and a case suffix. These spatial relators also mark the place where the object of an action is situated, as in (137) where the *ngakparn* (frog) is an object of the verb "to look" and is located in the bottle, as indicated by the case suffix *-ta*. Similarly in (138) the object of writing "name" is located on the school blackboard using a locative preposition. Finally, the place where an on-going activity is situated can be expressed by an adjunct marked for location, such as (138) where the place the teaching occurs is marked by a locative case suffix.

(135) an det *warlaku* **tebul-ta** *kanyjurra*.
 and the dog **table-LOC** down
 "And the dog is down **under the table**." (FHM002: AC11yr: Locative pictures)

(136) det *malyju* **langa** det *jiya-ngka* put-im det *sprite kanyjurra*.
 the boy **PREP** **the chair-LOC** put-TRN the sprite down
 "The boy put the bottle of Sprite down **on the chair**."
 (FHM004: MC11yr: Locative pictures)

(137) det *tubala* luk-in-at-*karra* *ngakparn* **botl-ta**.
 the 2DU look-CONT-at-CONT frog **bottle-LOC**
 "These two look at the frog **in the bottle**." (FHM150: RR23yr: Frog story)

- (138) *kajirri* **skul-ta** i=m raid-im-bat-*karra* neim **la** **bood.**
 woman **school-LOC** 3SG.S=NF write-TRN-CONT-CONT name **PREPboard**
 "A woman wrote the name on the board at school."
 (FHM005: AC11yr: Ergative bingo)

All of these types of topological relations in Gurindji Kriol can be encoded through any of three structures - a case-marker, as in (135), (137) and (138), a preposition (138), and finally double-marking (136). The relative proportion of types of locative marking is shown in Figure 25. The locative case suffix is the most dominant means of marking topological relations (n=1628, 87%). Thus most topological relations are marked using the Gurindji form. However the *langa* form is still found with 9.5% (n=182) of these constructions using the locational preposition on its own, and 3.5% (n=64) in double-marked structures.

Figure 25 *Relative proportion of locative marking in Gurindji Kriol*

TYPE OF MARKING	NUMBER OF TOKENS	%
Locative case-suffix	1628	87
Locative preposition	182	9.5
Double-marking	64	3.5
TOTAL	1874	100

7.4.2 What affects the use of *langa* in Gurindji Kriol

Although the locative case suffix is the dominant form for marking location in Gurindji Kriol, *langa* nonetheless occurs in 13% of these constructions, whether as a singleton form or in a double-marked construction. This section considers the motivations for the use of *langa*. Here I test its use in both prepositional constructions and double-marked constructions against a number of variables. Selecting the variables involved a different procedure from the previous chapter which examined possessive constructions. In the case of possessive constructions, categories of alienability were differentiated through non/use of dative marking in the source languages, and these categories could be tested against the use of various forms of possessive marking in Gurindji Kriol. A similar analysis was not possible in this study. One form of locative marking, as either a case

suffix or preposition is used categorically across topological relations in both Gurindji and Kriol. Thus here I am not looking for influences from the source languages, rather a new pattern of distribution based on grammatical categories or sociolinguistic variables. These variables were identified, in part, on the basis of the different types of topological relations encoded, as discussed above. The variables were chosen from patterns which emerged from the data as the tokens were extracted. For example, impressionistically the *langa* form seemed to occur more regularly in the speech of younger people, and in conjunction with two modifiers: the definite determiner *det* and the emphatic particle *rait* (directly). *Langa* also seemed to appear only rarely when the locative structure was fronted.

With these factors in mind, the use of the locational preposition was tested against these variables using the same multivariate analysis described in §6.4.2. 1874 tokens of locational constructions were coded for the dependent variable - the presence of *langa* (note that this did not differentiate double-marked constructions from prepositional constructions⁷⁷). The dependent variable was then tested against the age of the speaker (three categories - 5-16yrs, 16-25yrs and 26+yrs), whether an emphatic particle (*rait*) or determiner (*det*) was found in the construction (see examples (139), (141) and (142)), and whether the locational construction was found fronted in relation to the modified clause or nominal (see examples (143) and (144)). The use of *langa* was also tested against whether the locational construction modified another nominal, such as (135) and (137) or a clause, as in (138)⁷⁸. Finally speaker identity was included as a random variable to account for potential skewing which might result from the uneven number of tokens contributed by each speaker.

⁷⁷ Prepositional constructions were not distinguished from double-marking because the type of regression analysis I use requires the dependent variable to be binary. Thus the three-way distinction between the absence of *langa*, the presence of *langa* and the presence of *langa* in conjunction with a case suffix is not possible in this analysis (see §6.4.2. for more information on this statistical method). Here I test for the presence or absence of *langa*.

⁷⁸ Occasionally it was difficult to determine whether the location was modifying a nominal or a clause. In all cases, however, context helped classify these ambiguous examples. For example in (137), it is clear that "in the bottle" marks the location of the "frog", not the whole event. The boy was not also in the bottle while he was looking at the frog!

Dependent variable:	<i>langa</i>	(+/- <i>langa</i> is present)
Independent variables:	age	(3 categories B=5-15yr, C=16-25yr, D=26+yr)
	determiner	(+/- <i>det</i> is used)
	emphatic particle	(+/- <i>rait</i> is used)
	fronted	(+/- in front of either clause or nominal)
	clause	(+/- clause)
Random variables:	speaker	(one of 40 speakers)

The percentage of topological structures which use *langa* according to each factor, age, and whether it modifies a noun or clause is given in Figure 26. A full version of the statistical output can be found in §A5.

Figure 26 *Distribution of langa according to tested variables*
(* indicates significant variables)

			DET*	%	FRONT*	%	RAIT*	%
B 6-15 year	CLAUSE	<i>langa</i>	19	79	2	10.5	0	0
		Not <i>langa</i>	5	21	17	89.5	0	0
		Total	24		19		0	
	NOUN	<i>langa</i>	0	0	4	44.5	0	0
		not <i>langa</i>	0	0	5	55.5	0	0
		Total	0		9		0	
C* 16-25 year	CLAUSE	<i>langa</i>	25	64	7	6	5	100
		Not <i>langa</i>	14	36	109	94	0	0
		Total	39		116		5	
	NOUN	<i>langa</i>	5	45.5	2	6.5	1	50
		Not <i>langa</i>	6	55.5	28	93.5	1	50
		Total	11		30		2	
D* 26+ year	CLAUSE	<i>langa</i>	3	75	1	1	4	100
		Not <i>langa</i>	1	25	78	99	0	0
		Total	4		79		4	
	NOUN	<i>langa</i>	2	100	0	0	0	0
		Not <i>langa</i>	0	0	18	100	0	0
		Total	2		18		0	0

Figure 26 gives the distribution of *langa* in topological constructions according to age and the modified element (clause or nominal), and a range of variables including whether various modifiers and the position of the construction are also used in these constructions. No significant difference emerged between the use of *langa* in topological relations

which expressed the location of an activity (clause) or another entity (nominal). However the effect of the other variables on the use of *langa* was significant: Age C (16-25yrs) ($p < 0.001$), Age D (26+yrs) ($p < 0.01$), the use of a determiner ($p < 0.001$), emphatic particle ($p < 0.001$) and clause fronting ($p < 0.001$). These variables differed in their z value, that is some increased the likelihood of the use of *langa* and other factors decreased this likelihood. For example, the two older age categories had a negative z value which suggests that these speakers were less likely to use *langa* than younger speakers. Similarly, clause fronting decreased with the use of *langa*. On the other hand, *langa* is found in significantly greater numbers when a determiner is used, or the emphatic particle *rait*. Each of these significant variables will be discussed in turn.

First, the use of *langa* corresponds with the presence of the emphatic particle *rait* (<right). As is explained in §A1.6.3.3.1, *rait* has a temporal "still" meaning and a non-temporal "precisely" meaning, and has an equivalent Gurindji derivational morpheme -*rni* (only). The non-temporal meaning is relevant when *rait* appears in conjunction with a nominal. In this data set, all occurrences of *rait* correspond to *langa*, and -*rni* to a locative case suffix, as in (139) and (140) respectively.

(139) *jinek-kulu im=in bait-im rait la leg.*
 snake-ERG 3SG=PST bite-TRN **right PREP leg**
 "The snake bites him **bang on the leg.**" (FM030.B: CR54yr: Conversation)

(140) *jintaku marluka warlaku-ngku bait-im wartan-ta-rni.*
 one old.man dog-ERG bite-TRN **hand-LOC-ONLY**
 "The dog bites one old man **bang on the arm.**"
 (FHM090: CA 19yr: Locative pictures)

The correspondence of *rait* with *langa* is probably not particularly meaningful in terms of the grammar of Gurindji Kriol. Only 3 of the 40 speakers represented in the locative data sub-set use this form, and 2 of these speakers are a mother-daughter pair. Thus the use of *rait* in general could be a part of these speakers' idiolects, or alternatively, it may represent a code-switch into Kriol rather than an aspect of the grammar of Gurindji Kriol topological relations which needs to be accounted for. For example, (139) may be

analysed as a clause which begins with a Gurindji Kriol frame and then switches to Kriol somewhere in the verb phrase (the exact point is difficult to discern given the overlap of structures between the Gurindji Kriol and Kriol verb phrase).

On the other hand the correlation between *langa*, and the use of the determiner and the fronting of the locative-marked nominals can be explained in a unified age-based account of these constructions. Considering the general variable of age to begin with, the results of the regression analysis demonstrated that the age of the speaker plays an important role in the choice of location marking device. The two oldest groups use *langa* significantly less. The following table displays the use of locational construction across age groups more clearly.

Figure 27 *Age and the corresponding use of different locational constructions.*

Age	Double Marking	%	Locative Marker	%	Locative Preposition	%	TOTAL
B 6-15yrs	45	15.5	187	64.5	57	20	289
C 16-25yrs	16	1.5	1086	91	94	7.5	1196
D 26+yrs	3	1	389	91	31	8	389

The older two age groups pattern almost identically. In both of these groups, the use of *langa* either as the single marker of location or in conjunction with locative marking constitutes 9% of locational constructions. On the other hand, the youngest group's use of *langa* differs from the older groups. They use *langa* in 45.5% of all locational constructions, which is distributed relatively evenly between the prepositional and double-marked structures. A couple of explanations may be offered for this difference. To begin with, a synchronic analysis may be that the use of *langa* may be part of a children/teenage variety of Gurindji Kriol, which contrasts with the adult variety. However, I suggest a diachronic explanation where the significant rise in the use of the Kriol form represents the incremental spread of Kriol into the nominal grammar of

Gurindji Kriol. The strengthening use of aspects of Kriol structure in the noun phrase may be an indication of continuing competition between the three locative variants. Coupled with the dominance of Kriol in the verbal grammar, the increasing strength of the *langa* form could be seen as indicative of a continuation of a turnover to a more fully Kriol structure, rather than the current composite structure of Gurindji Kriol, which contains structural elements from both languages. Further evidence is provided by the other variables that produced significant results.

The correspondence of *langa* with a determiner in Gurindji Kriol is also probably age-related. *Langa* is more likely to be found if a determiner is used in conjunction with the nominal. 62.5% of all determiners occur in topological constructions containing *langa* (either in a PP or double-marked), and only 2% of locative case-marked constructions contain determiners. Examples of this type of construction are found in (141) and (142). In (141) a determiner modifies "beehive" within a double-marked construction, and in (142), "hole", in a prepositional construction.

(141) det *warlaku* i=m luk **langa** det **bi** *hawuj-ta* nojing
 the dog 3SG=NF look **PREP** **the** **bee** **home-LOC** nothing
 "The dog looked **into the beehive**, but couldn't see anything."
 (FHM167: KP12yr: Frog story)

(142) im=in jing-in-at **la** det **hol**, jing-in-at det *karu-ngku*.
 3SG=PST call-CONT-out **PREP** **the** **hole** call-CONT-out the child-ERG
 "He called out **down the hole**, called out did that kid."
 (FM061.D: LE18yr: Frog story)

The increased use of determiners seems to be associated with age, and therefore only indirectly with the use of *langa*. For example 26+ speakers use determiners 1.5% of the time in locational constructions, 16-25 yr olds, 4% and 6-15 yr olds, 8.3%. The determiner is derived from Kriol and is another characteristic of Kriol nominal structure which is slowly being integrated into Gurindji Kriol. Thus the use of the determiner is perhaps another piece of evidence for the gradual encroachment of Kriol into the nominal

structure of Gurindji Kriol. In this regard, the use of *langa* and the determiner are only indirectly related to each other through age.

The inverse is the case for fronted locative structures. In these utterances, the construction is found preceding either the clause or the nominal it modifies, as shown in (143) and (144). In the first example, the locative complement "on the nose" is found in sentence initial position. Similarly in (144) the locative complement is also found sentence-initially.

- (143) *jitji-ngka* na i bin bait-im im *nyila-ngku* mawujimawuji-ngku.
nose-LOC DIS 3SG.S NF bit-TRN 3SG.o that-ERG mouse-ERG
 "That mouse bit him **on the nose**." (FHM149: RS20yr: Frog story)

- (144) *puwa-ngka* na yu garra put-im an *partaj*.
car-LOC DIS 2SG MOD put-TRN and climb.up
 "You have to put it **in the car** and then get in yourself."
 (FM047.A: AR19yr: Conversation)

The use of *langa* decreases significantly in association with this feature. Thus, if the locative structure is fronted, it is more likely to be found with a locative case marker, as in (143) and (144) rather than a locative preposition. Only 6% of fronted locational constructions contain *langa*. This inverse association of *langa* with fronting may also relate to age, and less directly to the use of *langa*. The oldest age group are more generally flexible in their word order, using word order to express information structure more than younger people. This age group also use fronted locative structures much more often. 25% of these constructions from this age group are fronted compared with 12% from the 16-26 yr olds and 9.5% from the 6-15 yr olds.

Thus, in general, I suggest that the use of *langa*, the Kriol determiner and fronting all represent a cluster of features which signify the increasing dominance of the Kriol nominal structure, at least in the domain of marking topological relations. Within this change, the status of *langa* and double-marked constructions and their relationship needs some explanation. Two scenarios may be proposed. First, it may be argued that double-

marking represents a grammatical bridge between the sole use of the Gurindji-derived locative case suffix and the sole use of the Kriol-derived locative preposition, where *langa* is the end point of change. Thus in the initial competition between the case-suffix and preposition in the genesis of Gurindji Kriol, the case-suffix dominated, with *langa* and double-marking present only as marginal variants. Despite its presence, it is not clear where the singleton use of *langa* derives from. It may either be a minor part of the Gurindji Kriol language system itself left-over from competition with the case form, as suggested. Or it may be the result of code-switching between Gurindji Kriol and Kriol, and therefore an external variant, which is not a part of the mixed language system. Unfortunately, it is virtually impossible to tell without independent criterion for distinguishing Gurindji Kriol from code-switching (see §1.5.2 for further discussion). For example, (145) may be interpreted as a Gurindji Kriol clause if *langa* is considered a part of the mixed language system, however equally it may be interpreted as an utterance which begins in Gurindji Kriol (as determined by the combination of ergative marking and Kriol auxiliary verb), and then switches to Kriol somewhere around the indirect object "ice-cream". Unfortunately no independent criterion in this case is available which favours either interpretation.

- (145) an det man-*tu* i bin *jak*⁷⁹ aiskrim **langa** tebul.
 and the man-ERG 3SG.S NF make.fall ice.cream **PREP** table
 "And the man dropped icecream **on** the table."
 (FHM052: AC11yr: Locative pictures)

Nonetheless *langa* is present in the language environment, and as Gurindji Kriol continues to evolve, it has gained currency with younger speakers, with the double-marked form part of the transition stage to the dominance of *langa*.

A second interpretation may be that the double-marked construction is actually the result of continuing language change, rather than a transitional form of marking. Thus double-

⁷⁹ Note that *jak* is a Gurindji coverb and therefore does not take the transitive marker. This form is not the same as the Kriol verb *jakim* (which I usually transcribe as *jukim* to differentiate the forms). *Jukim* has overlapping semantics with *jak* but does not include the meaning "to fall unaided" which is also encoded by *jak*. Nonetheless I suspect that there is some confusion amongst younger Gurindji Kriol speakers about this distinction.

marking is the result of continuing pressure between the case and prepositional form, whether or not *langa* is a part of the internal language system or is introduced as a variant through continued code-switching. Evidence for this analysis can be found in Figure 27. Between age groups C and B, the use of prepositional constructions has doubled (7.5%-20%), however the use of double marking has increased 10 fold (1.5%-15%). Thus the use of double-marked constructions is increasing more rapidly than prepositional constructions. Further evidence for the analysis of double-marking as the goal rather than bridge form can be found in the more general persistence of the locative case suffix. For example, as will be discussed in §8.4.2.2, the locative suffix has been extended into marking goal constructions. Thus its usage is increasing in this respect. Moreover the locative case suffix is also found marking Kriol-derived locative demonstratives *hiya* (here) and *deya* (there), as shown in (146).

- (146) an yu warrkap **hiya-ngka**.
 and 2SG dance **here-LOC**
 "And you dance **here**." (FM050.B: KO6yr: Conversation)

The use of the locative with these demonstratives is analogous to the use of locative inflection with Gurindji-derived proximal and distal demonstratives to create locative demonstrative forms, for example *nyawa-ngka* (this-LOC = "here"). In the newer constructions involving the Kriol-derived locative demonstrative *hiya* and *deya*, the case suffix is redundant yet present, which demonstrates the continuing strength of these Gurindji elements. In this respect, the use of the locative marker is as much an act of identity as serving a linguistic function, as double marking expresses the dual Gurindji-Kriol identity discussed in §2.5. Thus with all of these arguments, I suggest, then, that double-marking is gaining strength. The fact that it is generally younger speakers using this form suggests that is a part of the continuing competition between locative marking elements and more general evolution of Gurindji Kriol. Thus the strategy of combining the Kriol and Gurindji locational markers to produce a double-marked construction is a compromise strategy, which is another outcome of the competition between Gurindji and Kriol elements in the nominal domain.

7.5 Conclusion

In conclusion, the result of contact and competition between the Gurindji case-suffix and Kriol preposition within topological relations has yielded similar results as the competition between equivalent Gurindji and Kriol elements in possessive constructions in Gurindji Kriol. In both of these domains, the Gurindji case suffix remains the dominant form for marking either topological relations or possession. However, where the dative case suffix is being extended in a previously unmarked domain of inalienable nominals, the locative case suffix is being supplemented by an innovative double-marked form. The rise of this structure extends across the various types of topological relations, and is largely age-related. I suggest that the synchronic observation of differences between the age groups represents a change which is occurring over time, and is just one aspect of the incremental introduction of Kriol elements into the Gurindji Kriol noun phrase.

8. GOAL CONSTRUCTIONS IN GURINDJI KRIOL

8.1 Introduction

In this chapter, I discuss a third result of contact and competition between Gurindji case-marking and Kriol prepositions in the formation of Gurindji Kriol and the ongoing evolution of this mixed language - the creation of composite forms which map the phonological form from one language onto the system of the other language. This outcome will be demonstrated in the domain of *locomotion events* in Gurindji Kriol, and the use of case marking and prepositions for encoding the goal in these constructions. A definition of locomotion events is provided in §8.2. The goal in these events can be encoded by a number of forms, which are derived from Gurindji Kriol's source languages, as well as by two innovative forms which are the result of convergence between Gurindji and Kriol forms. In Gurindji, zero, allative and dative marking, and a -DAT-NMZ-ALL cluster all mark goals in locomotion events (§6.3.1). Kriol uses a general locative preposition *langa* or zero-marking to express goals (§6.3.2). In Gurindji Kriol, all of these forms have been adopted to indicate the goal in these events. Additionally, the Gurindji-derived locative case suffix expresses goals, despite never being found marking this function in Gurindji. The Kriol-derived dative preposition, *bo*, is also found, although it is never used to encode goals of motion in Kriol, only in purposive constructions.

Though these phonological forms are derived from Gurindji and Kriol, they represent convergence between these languages. Specifically the Kriol dative preposition is distributed according to the Gurindji pattern of marking animate goals, and conversely, the Gurindji locative marker is being extended into non-animate goals, following a Kriol pattern which does not distinguish between location and goal marking (§8.4.2).

The Gurindji Kriol data for this chapter is derived from a set of 434 utterances expressing locomotion events. The data set for this chapter is smaller than that of the previous chapters because these goals are described more rarely in conversation. They also have fewer verbs associated with them, which means that only a limited set of pictures was produced for peer elicitation exercises. This dataset is too small for a quantitative study, nonetheless patterns of usage emerge quite clearly from a qualitative analysis. 36 speakers are represented in the data: 15 speakers who are 6-15 years old (B), 11 speakers 16-25 years old (C) and 10 speakers 26+ years old (D). Gurindji and Kriol data is derived from my own work as well as from McConvell's (1996) Gurindji Grammar, Sandefur's (1979) Kriol grammar, Munro's (2005) thesis on Kriol. Additional Kriol material comes from Diwurruwurru-jaru Aboriginal Corporation⁸⁰. As with the previous chapters, more information about the data sources, speakers and elicitation methodology can be found in §1.6.

8.2 An overview of goal marking in locomotion events in Gurindji Kriol

Following Wilkins' (2006, p. 40) work on Arrente, motion events in Gurindji Kriol are defined as clauses containing a ground or goal which can be potentially marked with an allative case suffix, though this does not limit the marking options available, as this chapter will demonstrate. This definition excludes motion events which use *put*-type verbs. Though these events involve a change of location, the goal is only ever locative-marked in Gurindji Kriol, as was discussed in the previous chapter. Allative marking is

⁸⁰ I am grateful to Diwurruwurru-jaru Aboriginal Corporation and in particular Lauren Campbell and Greg Dickson's work with Queenie Brennan, Brenda Forbes and John Joshua which helped fill in some gaps in the Kriol literature.

never used, which distinguishes Gurindji Kriol, and indeed Gurindji, from neighbouring languages such as Warlpiri.

Based on Schultze-Berndt's (2000; 2006a) classification of motion events in Jaminjung⁸¹, a number of different motion event types can be distinguished in Gurindji Kriol: locomotion, change of location and ballistic motion events. In this chapter I will only examine *locomotion* events. Locomotion events involve the translocation of a figure away from a deictic centre, as in (147) where the children who are the figure move towards the ground, the car, and (148) where the figure, "the cake" moves similarly, however here it is also accompanied by a volitional entity.

(147) dei-m gon rarrarraj-karra **motika-ngkirri** tumaj ngawa.
 3PL.S-PRS go run.REDUP-CONT **car-ALL** because rain
 "They run **to the car** because it's raining." (FHM119: RR23yr: Allative pictures)

(148) jintaku kirri-ngku i=m teik-im-bat keik **shop-kirri**.
 one woman-ERG 3SG.S=NF take-TRN-CONT cake **shop-ALL**
 "One woman is taking the cake **to the shop**."
 (FHM124: RS20yr: Allative pictures)

Schultze-Berndt's classification of motion events is morpho-syntactic, based on restrictions in combinations of inflecting verbs, coverbs and case markers. Here I distinguish locomotion events from other motion events by the main verb's ability to combine with the semantically basic Kriol verbs *gon* (go), *kom* (come), *teikim* (take) or *bringim* (bring). The main verbs⁸², which are often derived from Gurindji coverbs, provide information about the manner of locomotion, for example *rarrarraj* (run) and *tarukap* (swim); and also the path of locomotion, for example *warlarrrip* (fly around) and *walik* (go around). Because I am interested in goal marking in these constructions, I will not include the choice of case suffix as a method of classification in order to avoid circularity, though, as I said above, the potential use of allative case marking is the

⁸¹ Jaminjung is a neighbouring language spoken to the north of Kalkaringi in Timber Creek (see map). Though Gurindji and Jaminjung belong to different language families, Jaminjung and Ngumpin respectively, they share an areal feature of a coverb-inflecting verb complex.

⁸² See §A1.2.1 for a discussion of the Gurindji Kriol verb system.

defining feature of motion events. Thus, though (149) involves the translocation of a person into the figure, "the water", *jirrupu* (dive) only combines with the Kriol verb *baldan* (fall), and never with *gon* (go), and is therefore not considered a locomotion event here. Ballistic motion events involve unaccompanied motion, as in (150), and are also discounted from this analysis on semantic grounds.

(149) *jintaku ngumpit i=m baldan ngawa-ngkirri jirrupu.*
 one man 3SG.S=NF fall **water-ALL** dive
 "One man dived **into the water**." (FHM137: VB20yr: Allative pictures)

(150) *det boi-ngku i=m juk-im wumara ngawa-ngkirri.*
 the boy-ERG 3SG.S=NF throw-TRN rock **water-ALL**
 "The boy throws a rock **in the water**." (FHM142: LS20yr: Allative pictures)

As was discussed in the introduction, goals in locomotion events can be marked in a number of different ways in Gurindji Kriol. Goals can be encoded using the allative marker, however they are also found with a dative case suffix or a locative case suffix both derived from Gurindji, a dative or locative preposition from Kriol, or indeed no marking, which is a strategy employed by both source languages. Three types of goal marking are shown in (151). This example is an excerpt from the Bird story which describes three boys' pursuit of a baby bird and the various mishaps they suffer along the way. In line (a), the goal, *det jurlaka* (the bird) is marked by a dative preposition *bo*. The nest where the bird is situated is marked with an allative case suffix in line (b), and finally in (c) the goal *hawuj* (home) is unmarked.

(151) (FM045.A: SS18yr: Bird story)

(a) *dei bin rarraj na dei bin gon la=im bo det jurlaka.*⁸³
 3PL.S NF run DIS 3PL.S NF go OBL=3SG.O **PREP the bird**
 "They ran now, they ran **after the bird**."

⁸³ It may be argued that this clause actually marks a purposive construction because goal constructions and purposive constructions are indistinguishable when the goal or purpose is animate. Both nominals receive dative marking (either a preposition or case marker). Here I treat the clause as a goal construction, in order to illustrate the various forms used to mark these constructions.

- (b) an **nes-kirri**, hiya det nes *jurlaka-yu*.
and **nest-ALL** here the nest bird-DAT
"And (they ran) to its nest, here's the bird's nest."
- (c) "wi teik-im im **hawuj**," Bumba bin tok
1PL.S take-TRN 3SG.O **home** NAME NF talk
" 'We'll take it home,' said Bumba."

The range of constructions available in Gurindji Kriol and its source languages are given in Figure 28.

Figure 28 Encoding goals in Gurindji Kriol and its source languages

Type	Name	Construction	Language
A1	Allative-Marked Goals	(1) NP-ALL	Gurindji Kriol Gurindji
A2		(2) NP-DAT-NMZ-ALL	Gurindji
B1	Dative-Marked Goals	(1) NP-DAT	Gurindji Kriol Gurindji
B2		(2) DAT.PREP+NP	Gurindji Kriol
C1	Locative-marked Goals	(3) NP-LOC	Gurindji Kriol
C2		(4) LOC.PREP+NP	Gurindji Kriol Kriol
D1	Unmarked Goals	(5) NP	Gurindji Kriol Gurindji Kriol

Goal marking in the examples given above can be categorised according to the types given in Figure 24. Examples (147),(148) and (151)(b) can be classified as A1 type goal constructions, (151)(a) is a B2 type and (151)(c) is a D1 construction. Examples of the other constructions, and the motivations for the choice of goal marking will be discussed further in §6.4.1. Finally, as can be seen from this table, the use of goal marking in Gurindji Kriol does not correlate neatly with either Gurindji or Kriol. Moreover, two forms are unique to Gurindji Kriol, i.e. they are not found in goal constructions in either of the source languages: the dative preposition (B2) and the locative case suffix (C1). A

discussion of the distribution of goal marking in Gurindji Kriol as a result of the inherent semantic attributes of goals and interplay between goal marking equivalents in the source languages can be found in §8.4.2.

8.3 Goal marking in locomotion events in Gurindji Kriol's source languages

8.3.1 Gurindji

Locomotion events in Gurindji consist of a *ya-* (go/come) or *kang-* (take/bring) inflecting verb, a coverb which provides information about the manner and/or path of the motion, and a goal nominal which can be potentially marked for allative case. This definition of locomotion events follows Schultze-Berndt's (2006a) characterisation of locomotion events in Jaminjung, a language spoken to the north of Kalkaringi which shares the areal feature of an inflecting verb-coverb structure. For example, in (152), the inflecting verb *yanana* (go) combines with a coverb *walirrip* (circling) which describes the manner (flying) and path (spiral) the bird takes to move towards the goal which is an allative-marked nominal *marru* (house).

- (152) *jurlak* *ngu walirrip* *ya-nana* *marru-ngkurra*. (A1)
 bird CAT circle.down go-PRS.IM house-ALL
 "The bird circles downwards towards the house."
 (FHM146: VD: Allative pictures)

Whilst all goals can be expressed using an allative-marked nominal, some goal nominals may be found with other case markers. The choice of case-marker depends on the inherent semantic characteristics of the nominal. First, all animate goals may be expressed using allative marking, as in (153), however they may also be found with dative marking, as shown in (154). However, the most frequently occurring marking is a combination of dative marker+nominaliser+allative marker (McConvell, per. comm.). An example of this type of case stacking is shown in (155) where the goal nominal *kajirri* (old woman) is found with this cluster of suffixes. The resultant multi-morphemic word may be literally interpreted as "to the place where the old woman is". A final feature of goal constructions involving animate nominals is presence of an indirect object

pronominal clitic which is found on the catalyst and cross-references the goal, though only if it is third person, as shown in (153), (154) and (155). Non-third person goals are marked using an accusative pronoun on the catalyst, as shown in (156).

- (153) *Jungurra ngu-rla ya-nku kajirri-yirri-ma.* (A1)
 SUB.SECT CAT-3DAT go-FUT woman-ALL-DIS
 "Jungurra will go **to the old woman.**" (McConvell, 1996, p. 85)

- (154) *yapart ngu-rla ya-nana kajirri-wu makin-ta-wu, wari.* (B1)
 sneak CAT-3DAT go-PRS.IM old.woman-DAT sleep-LOC-DAT snake
 "The snake sneaks up **on the old woman** who is sleeping."
 (FHM146: VD: Allative pictures)

- (155) *kajirri-wu-ny-jirri ngu-rla yapart ya-nana wari-ma.* (A2)
 woman-DAT-NMZ-ALL CAT-3DAT sneak go-PRS.IM snake-DIS
 "The snake sneaks up **to the place where the old woman is.**"
 (FHM146: VD: Allative pictures)

- (156) *jumpaka ngu-rna-ngku ya-nana.*
 permanently CAT-1SG.NOM-2SG.ACC go-PRS.IMP
 "I'm coming **to you** all the time." (Gurindji dictionary)

A final observation regarding animate goals is that allative marking is never found in conjunction with animate indirect objects of *take*-type verbs. Dative marking always encoded animate goals in these clauses. An example is given in (157). These goal constructions differ little from benefactive constructions, except that all benefactors in these constructions are expressed by dative marking regardless of their animacy, whereas inanimate goals in *take*-type locomotion events receive allative marking.

- (157) *nyanuny-ku jaju-wu ngu-rla ka-ngana mangarri punyu* (B1)
 3SG.DAT-DAT MM-DAT CAT-3DAT take-PRS.IM veg.food good
 "She takes the cake **to her grandmother.**" (FHM146: VD: Allative pictures)

A different pattern of marking can be found on goals which involve place names. In these constructions, the goal can be expressed with or without an allative marker. For example, (158) below is an excerpt from a speech which airs an older man's grievances about young Gurindji people's reliance on European technology, and their loss of traditional Gurindji culture. Here he describes the distances Gurindji people walked before the

introduction of cars. Two destinations are named. The first, *Inverway* occurs without allative marking, and the second *Limbunya* is found marked. This optionality of allative marking is an areal feature of this region, with a similar pattern found in neighbouring languages such as Bilinarra (Ngumpin) and Jaminjung (Jaminjungan).

(158) *kanka-rra* *ngu-rnalu ya-nani* *kankula* **Inverway** (D1)
 upstream-ALL CAT-1PLEX go-PST.IM up **PLACE.NAME**

kayi-rra-k **Limpayung-jirri.** (A1)
 north-ALL-INCHO **PLACE.NAME-ALL**
 "We used to walk upstream and uphill **to Inverway** and north **to Limbunya.**"
 (McConvell, 1996, p. 114)

Finally, general location goals are expressed only using the allative case suffix. For example, (159) is an excerpt from a fishing story. This utterance is reported speech where the speaker takes on the part of a character who is suggesting a good fishing spot. An allative-marked place name *Lawi* is followed by a similarly marked location *palwany* (flat rocks). In (160) *ngurra* (house/home) is also marked allative. In some languages, such as Kriol which will be discussed in §6.3.2, the equivalent nominal is only optionally marked.

(159) *ya-nku-rliwula* *kani-mpa-rra* *Lawi-ngkurra* **palwany-jirri.** (A1)
 go-FUT-1INCDU downstream-LOC-ALL PLACE.NAME-ALL **flat.rock-ALL**
 "Let's go downstream to where there is flat rocks at Lawi".
 (McConvell, 1996, p. 111)

(160) *kang-ana mangarri* *ngu* **ngurra-ngkurra.** (A1)
 take-PRS.IM veg.food CAT **home-ALL**
 "She takes the cake **home.**" (FHM146: VD: Allative pictures)

The distribution of goal marking in locomotion events is summarised in Figure 29. Gurindji distinguishes three general groups of goals through the use of goal marking - (i) animates which are the only nominals found with dative marking, (ii) locations which are allative-marked, and (iii) place names which are optionally unmarked.

Figure 29 Goal marking in locomotion events in Gurindji

Type	Name	Construction	Nominal Type
A1	Allative-Marked Goals	(1) NP-ALL	Animate Place Name Location
A2		(2) NP-DAT-NMZ-ALL	Animate
B1	Dative-Marked Goals	(1) NP-DAT	Animate
D1	Unmarked Goals	(5) NP	Place Name

8.3.2 Kriol

Kriol makes little formal distinction between topological relations and motion events. Both expressions of spatial configuration use the same form, *langa*⁸⁴ to mark the goal or location. This shared category reflects a similar pattern found in three of Kriol's substrate languages, Ngalakgan, Marra and Alawa, which do not distinguish between locative and allative marking (Munro, 2005, p. 139). However, though the same form is used in topological relations and motion events in Kriol, these types of spatial configuration can be differentiated by the distribution of the preposition. Where *langa* is optional in many motion events in Kriol, depending on the semantics of the goal nominal, as will be shown below, it is required for marking location. For example in (161) the sentence would be considered ungrammatical if the preposition *la* were omitted.

- (161) wal ai bin bon **la** Nutwood.
 well 1SG.S PST born **PREP PLACE.NAME**
 "Well I was born at Nutwood." (Munro, 2005, p. 116)

A few verbs can combine with both an unmarked goal nominal and a goal nominal marked with a preposition, depending on the animacy of the goal. These verbs can be classed as locomotion verbs, and constitute a similar set of verbs as that found in Gurindji and Gurindji Kriol, for instance *gu* (go), *wok* (walk), *ran* (run), *teikim* (take), and *gajimap*

⁸⁴ There is some regional variation in this form, with its variants: *langa*, *la*, *nanga*, *na*. I use *langa* more generally to refer to *la* and *langa*, which the only forms found at Kalkaringi.

(carry). For example, in (162), the verb *wokwok* (walk) is found with the preposition *langa*, whereas in (163) the nominal is unmarked. I will use this combinatory criterion to define goal constructions in Kriol.

(162) det gel wok-bek **la kemp.** (C2)

the gel walk-back **PREP house**

"The girl walked back **home/to the house.**" (DAC texts: JJ: Allative pictures)

(163) det gel im wok-bek **kemp.** (D1)

the girl 3SG walk-back **home**

"The girl walked back **home/to the house.**" (DAC texts: QB: Allative pictures)

Like Gurindji, Kriol distinguishes animate goals from many other types of goals. However, unlike Gurindji, Kriol does not differentiate animate goals through the type of marker, rather through the distribution of marking. These goals are never found with a dative preposition, such as *bo*, *bla* or *blanga*, however animate goals are always expressed using the locative preposition, *langa*. Marking is not optional for animate goals. Two examples of goal constructions involving animates are given in (164) and (165).

(164) det dog bin ran **la det ol man** an bait-im im. (C2)

the dog PST run **PREP the old man** and bite-TRN 3SG

"The dog ran **to the old man** and bit him."

(FHM096: SY18yr: Locative pictures)

(165) det gel im wok **la det olwoman** weya im slipslip. (C2)

the girl 3SG walk **PREP the old.woman**where 3SG sleep.REDUP

"The girl walks up **to the old woman** who is sleeping."

(DAC texts: BF: Allative pictures)

Patterning with animate nominals are general location nominals which are also always marked with the locative preposition. General location nominals include places and locations which are not place names, homes or public buildings. Examples of these types of nominals and their marking is given in (166) and (167).

buildings, such as shops, schools, hospitals and clinics are also only optionally marked with *langa*. This nominal division is witnessed in other languages. Again German uses the preposition *auf* (on) to mark goals which are public buildings, rather than *zu* (to) which is used for most other goals. Some examples from Kriol are shown below. In (170) the goal complement *hospitul* (hospital) of the locomotion verb *gu* (go) is unmarked, whereas in (171) the goal is marked.

(170) det lidl gel bin gu **hospitul** ged-im nidul. (D1)
 the little girl PST go **hospital** get-TRN needle
 "The little girl went to the hospital to get a needle."
 (FHM096: SY18yr: Locative pictures)

(171) det gel im wok **la shop**. (C2)
 the girl 3SG walk **PREP shop**
 "The girl walks to the shop." (DAC texts: BF: Allative pictures)

The various patterns of goal marking and goal types are given in Figure 30. Kriol groups its nominals into two categories according to the pattern of goal marking - (i) animates and locations require marking whereas (ii) place names, public buildings and homes are only optionally marked.

Figure 30 Goal marking in locomotion events in Kriol

Type	Name	Construction	Nominal Type
C2	Locative-marked Goals	(4) LOC.PREP+NP	Animate Location Place Name Home/House Public building
D1	Unmarked Goals	(5) NP	Place Name Home/House Public building

8.4 Goal marking in Gurindji Kriol

As was demonstrated in the previous sections, Gurindji and Kriol encode locomotion events in different ways. First, they use different forms of marking to encode goals - Gurindji encodes goals with case suffixes and Kriol uses prepositions, though it must be noted that zero-marking is used to express goals in both languages. Another difference between Gurindji Kriol's source languages and their construal of this type of motion event is the way they treat different types of nominals. For example, while Gurindji distinguishes animates from other goal types through the use of dative marking, Kriol subsumes animates into a more general category of 'locations other than place names, public buildings or homes'. The purpose of this section is to map locomotion events in Gurindji Kriol, treating the forms and distribution of marking as an outcome of the interplay between the Gurindji and Kriol systems. The first section, §6.4.1 describes the range of goal marking found in Gurindji Kriol and its distribution according to nominal type, and §8.4.2 examines the path by which these patterns may have formed.

8.4.1 The range of goal marking in locomotion events in Gurindji Kriol

In the introduction, I defined Gurindji Kriol locomotion events as clauses which contained a verb which was either a semantically basic Kriol motion verb such as "go", "come", "take" or "bring", or was a verb which could potentially combine with one of these verbs. This criterion includes verbs and verb complexes such as *gu/gon*, *gon rarraĵ*, and *arraĵ* (go/run), and *teikim*, *teikim laĵap* and *laĵap* (take/carry.on.shoulders), but excludes verbs such as *jirrupu* which only combine with *baldan* (fall). Because these verbs fall under the more general category of motion verbs they can potentially, but not necessarily, take a goal nominal which is marked by a Gurindji allative case suffix. The "not necessarily" aspect of this criterion is necessary to express the fact that not all goal nominals will be found with allative marking, either because they do not accept allative marking or because there is some variation in the use of goal marking. The purpose of this section is to map this variation.

First, animate goals in Gurindji Kriol are always expressed by dative marking, whether it be a dative preposition derived from Kriol or a dative case suffix from Gurindji. Animate goals are never found accompanied by an allative case suffix or locational preposition. The following examples show this dative marking on animates in goal constructions. These constructions contain a locomotion verb complex consisting of the basic Kriol verb *gon* (go) or *teikim*, and the *gon* examples are coupled with a verb which expresses the manner of motion *yapart* (sneaking). In (172) and (173) a dative case suffix marks *kajirri* (old woman) as the goal, and in (174) the preposition *bo* is used. Note also that in (172), the animate goal is also cross-referenced by an oblique-marked pronoun *la=im* (§A1.8), reminiscent of a similar Gurindji pronominal clitic structure (see (154) and (155), for example). This use of the Kriol dative preposition differs from Kriol which does not use the dative preposition in any locomotion events. The use of this form of marking will be discussed more in §8.4.2.1.

- (172) *nyila jinek i=m gon yapart la=im kajirri-yu.* (B1)
 that snake 3SG.S=NF go sneak OBL=3SG.O **woman-DAT**
 "That snake sneaks up **on the old woman.**" (FHM125: LE18yr: Allative pictures)
- (173) *karu teik-im kajirri-yu makin-ta keik.* (B1)
 child take-TRN **woman-DAT** sleep-LOC cake
 "The child takes the cake **to the old woman** who is sleeping."
 (FHM147: TA13yr: Allative pictures)
- (174) *det naja jinek i=m gon yamak-pa-rni bo det kajirri.* (B2)
 the another snake 3SG.S=NF go sneak-PA-ONLY **PREP the woman**
 "Another snake goes really sneakily towards **the old woman.**"
 (FHM123: CA19yr: Allative pictures)

Turning now to the distribution of goal marking on public buildings, place names and homes, these goal nominals can be expressed using an allative case suffix, locative preposition, zero marking or a locative case suffix. Some examples are given below. (175)-(178) shows a full range of variation of goal marking for public building nominals - an allative case suffix, preposition, zero marking and locative case suffix, respectively. More examples of this type of variation are shown in (179) where a place name *Jetlmen* (<Settlement, Kalkaringi) is unmarked, but is allative marked in (180). An example of a

locative-marked place name is given in (181), and an unmarked "home/house" nominal in (182).

- (175) det jinek i bin gon **shop-kirri**. (A1)
 the snake 3SG.S NF go **shop-ALL**
 "The snake went **to the shop**." (FHM119: RR23: Allative pictures)
- (176) jinek bin gon **langa shop**, *walyak*. (C2)
 snakeNF go **PREP shop** inside
 "The snake went **to the shop**, and went inside."
 (FHM118: AR19yr: Allative pictures)
- (177) *partaj* motika-*ngka* wi-l teik-im-bek yu **hospel** (D1)
 climb car-LOC 3PL.S-IF take-TRN-back 2SG **hospital**
 "Climb into the car and we'll take you **to the hospital**."
 (FM045.A: SS18yr: Bicycle story)
- (178) wan *kirri* i=m teik-im keik **shop-ta**. (C1)
 a woman 3SG.S=NF take-TRN cake **shop-LOC**
 "A woman takes the cake to the shop."
 (FHM148: KA14yr: Allative pictures)
- (179) wi-rra gon na motika-*ngka* **Jetlmen**. (D1)
 1PL.S-MOD go DIS car-LOC **Kalkaringi**
 "We're about to go in the car **to Kalkaringi**." (FM027.B: CE25yr: Conversation)
- (180) *karu* teik-im **Jetlmen-jirri** keik. (A1)
 child take-TRN **Settlement-ALL** cake
 "The child takes the cake **to Kalkaringi**." (FHM147: TA22yr: Allative pictures)
- (181) wan jinek bin gon **Wave-hill-ta**. (C1)
 a snakeNF go **Kalkaringi-LOC**
 "A snake went **to Kalkaringi**." (FHM148: KR14yr: Allative pictures)
- (182) i bin teik-im-bek *nyanuny ngakparn* na **hawuj**. (D1)
 3SG.S NF take-TRN-back 3SG.DAT frog DIS **home**
 "He took his frog back **home**." (FHM122: SS18yr: Frog story)

Finally, general locations differ slightly from place names, public buildings and homes in their goal marking in that general locations are never found zero-marked. They may be

expressed by an allative or locative case marker, or a locative preposition, as is shown in (183), (184) and (185) respectively. All of these examples describe the same event in a picture book, however the speakers encode the goal using different forms. The use of locative case marking on inanimate goals in (184) is interesting given that Gurindji does not use this form in locomotion events. The motivation for the use of this form is discussed in §8.4.2.2.

(183) *karu-walija* gon **motika-ngkirri** *rarraaj*. (A1)
 child-PAUC go **car-ALL** run
 "The children run **to the car**." (FHM137: VB20yr: Hunting story)

(184) *jei bin rarraaj* **motika-ngka**. (C1)
 3PL.S NF run **car-LOC**
 "They ran **for the car**." (FHM008: MC12yr: Hunting story)

(185) *jei bin rarraaj* gu **la det motika** na. (C2)
 3PL.S NF run go **PREP the car** DIS
 "They ran **for the car**." (FM031.C: AC11yr: Hunting story)

This distribution of goal marking is summarised in Figure 31. Nominals can be grouped according to the patterns of goal marking found - (i) animates, which are dative-marked, (ii) place names, public buildings and homes, which are found with allative and locative case-suffixes, a locative preposition or no marking, and (iii) general location nominals, which differ from the previous category in their inability to be unmarked.

Figure 31 Goal marking in locomotion events in Gurindji Kriol

Type	Name	Construction	Nominal type
A1	Allative-Marked Goals	(1) NP-ALL	Location Place name Public buildings Home
B1	Dative-Marked Goals	(2) NP-DAT	Animate
B2		(3) DAT.PREP+NP	Animate
C1	Locative-marked Goals	(4) NP-LOC	Place name Public buildings Home
C2		(5) LOC.PREP+NP	Place name Public buildings Home
D1	Unmarked Goals	(6) NP	Place name Public buildings Home

8.4.2 Convergence in goal marking in Gurindji Kriol

The use of the Kriol-derived dative preposition to mark animate goals and the Gurindji-derived locative case-suffix to encode inanimate goals in Gurindji Kriol is curious given that these forms are not used in the languages from which they are derived. Kriol does not express animate goals of motion with a dative preposition, and similarly, the locative case-suffix does not mark inanimate goals in Gurindji. In this section, I will show that the presence of these forms in Gurindji Kriol is the result of competition between the functionally equivalent forms from the source languages, in particular distributional pressure from the language that they are not derived from. I will also demonstrate that they are also relatively recent innovations, if age is taken as an indicator of diachronic development (see §10.3 for further comments on this interpretation of the age variable).

8.4.2.1 Animate goal marking and the dative preposition

Two aspects of *animate* goal marking in Gurindji Kriol provide interesting points of comparison with Gurindji Kriol's source languages - (i) the general use of dative marking (in the form of a case marker or preposition) and (ii) the use of the dative preposition *bo*. First, one form of dative marking in Gurindji Kriol, the dative case suffix, is clearly derived from Gurindji. However, as was shown in §6.3.1, dative case-marking is quite marginal in Gurindji goal constructions with the dative-nominaliser-allative cluster favoured, although the dative case suffix is the only form which can be used for the animate goal of *take*-type verbs in Gurindji. Nonetheless, it is the dative form which has extended throughout the entire class of animate nominal goals in Gurindji Kriol locomotion events, such that no other form of marking is found. Indeed the use of a dative marker to express animate goals extends into other realms of motion events such as ballistic motion, for example (186), where the distinction between throwing an object *at* someone (target) and *to* someone (recipient) is not made.

- (186) kik-im det futbal na *kartiya-walija-ku*.
 kick-TRN the football DIS **white.fella-PAUC-DAT**
 "Kick the ball **to/at that mob of white fellas**." (FM005.B: SS18yr: Conversation)

Perhaps, more interesting, is the presence of a form which is not used in either language to mark these types of goals. Though the form of the dative preposition (*bo*) is derived from Kriol, it is not used at all in Kriol to mark animate goals (see §6.3.2). Instead animate goals are marked in a similar manner as other goals using the general preposition *langa*. The choice of the dative preposition seems to be age related, as is shown in Figure 32. These numbers only include goal marking derived from the peer-elicited exercises (§1.6.3.1.3).

Figure 32 Choice of dative marking according to age in GK animate goals

	B (6-15yr olds)	C (16-25yr olds)	D (26+ yr olds)
Case suffix	3 (30%)	22 (55%)	5 (83.5%)
Preposition	7 (70%)	16 (40%)	1 (16.5%)
Double marking	0 (0%)	2 (5%)	0 (0%)

Both age groups C and D use the dative case suffix more often to mark animate goals in locomotion events than the youngest age group which uses the dative preposition more often. These numbers are too small to determine whether the difference in age is statistically significant, however they do suggest a shift from the case suffix towards the preposition. This age-related trend follows similar patterns discussed for locative marking in the previous chapter (§7.4.2), though few instances of double-marking can be observed. This change in marking probably represents the incursion of Kriol into a generally Gurindji-structured nominal system.

Regardless of age, what is more remarkable is the use of the dative preposition at all, given its non-use in locomotion events in Kriol. I suggest that the use of the Kriol dative preposition was a two-step process which began with the increasing dominance of the Gurindji dative case suffix across the animate set of nominals which marginalised other forms such as the allative marker and dative-nominaliser-allative cluster. Following this spread, the Kriol dative marker was then mapped onto this pattern. The result is a composite of a mostly Gurindji pattern with an increasingly Kriol surface form. This change probably began with the genesis of the mixed language, but is also the result of ongoing competition between animate marking variants in Gurindji Kriol. This same process is not restricted to goal constructions in Gurindji Kriol but can be observed in other structures. For example, Kriol marks indirect objects in semi-transitive clauses using the *langa* preposition, as in (187). On the other hand, Gurindji uses a dative case suffix, as shown in (188). Gurindji Kriol uses the Gurindji-derived case suffix, but also the Kriol-derived dative preposition. Again the structure is derived from Gurindji, but the

form is from Kriol. An example of this type of structure is given in (189), where the indirect object *nyanuny karu* (her child) is marked with a dative preposition. This sentence translates as both "talks to" and "talks on behalf of".

(187) *det olgaman im toktok la det yanggel.* (Kriol)
 the old.woman 3SG tok.REDUP PREP the girl
 "The old woman is talking **to the girl.**" (FHM096: SY18yr: Dative pictures)

(188) *nyila ngu-rla wamala-wu ma-rnana jarrakap.* (Gurindji)
 that CAT-3DAT girl-DAT talk-PRS.IM talk
 "That one is talking **to the girl.**" (FHM035: CR54yr: Dative pictures)

(189) *nyanuny Mami bin tok bo nyanuny karu.* (GK)
 3SG.DAT mother PST talk PREP 3SG.DAT child
 "The mother talks **to her child.**" (FHM002: AC11yr: Dative pictures)

8.4.2.2 The use of the locative case-suffix

The use of the locative case-suffix to encode inanimate goals (inc. general locations and place name goals etc) represents the converse of the situation described for animate goals. Here the use of a Gurindji-derived form is an innovation in Gurindji Kriol, in that this case-suffix does not function as a goal marker in Gurindji. As with the animate goals, much of the use of the locative-marker can be attributed to age. These numbers only include goal marking derived from the peer-elicited exercises (§1.6.3.1.3).

Figure 33 Goal marking of inanimate goals (inc. place names etc) according to age

	B (6-15yr olds)	C (16-25yr olds)	D (26+ yr olds)
Allative marker	17 (29%)	101 (43%)	42 (59%)
Preposition	6 (10%)	15 (6.5%)	6 (8.5%)
No marking	14 (23.5%)	93 (39.5%)	15 (21%)
Locative marker	22 (37.5%)	25 (11%)	8 (11.5%)

As is demonstrated in Figure 33, the use of different goal marking forms differs across age. The allative marker is the favoured form of 26+ year old speakers, whereas no marking is just as commonly found as the use of the allative marker for age group B. The most prevalent form for 6-15 year old speakers is neither of these forms of marking, but the locative marker which accounts for 37.5% of all inanimate goal marking in locomotion events, compared with about 11% for the older two age groups.

The use of the locative case suffix to mark goals in Gurindji Kriol represents the mirror opposite of the convergence process described for animate goals. Where a Kriol form was mapped onto a Gurindji structure in animate goal marking, in this case, a Gurindji form has been mapped onto a Kriol distribution of marking. As was described in §6.3.2, Kriol makes no distinction between locative marking and goal marking, using the one form, *langa*, to express both ground nominals in topological relations and locomotion events. Gurindji, on the other hand, encodes goal and locative relations using distinct forms, allative and locative case marking respectively. In Gurindji Kriol, the locative case-marker is being extended into goal constructions. In this respect, the Gurindji form is beginning to encode both locations and goals, in the same manner as Kriol.

This change in the distribution of the Gurindji-derived locative case suffix also seems to be occurring in other types of motion events. For example, the locative marker is used for ballistic motion (190), as well as the allative marker (191), despite the fact that the allative marker is the only form used in Gurindji. Similarly both forms are found marking goals of ballistic motion events where only the allative marker is used in Gurindji, as shown in (193), (194) and (195). Note that in (196) a locative marker is used, by a younger speaker of Gurindji. Older speakers report that this form is ungrammatical, thus it is not clear whether the use of the locative marker is an influence from Gurindji Kriol (the speaker is also a GK speaker), or whether this optionality is actually present in Gurindji. It is beyond the scope of this chapter to study this issue. The most important observation from these examples is the use of the locative marker in other forms of motion events.

- (190) *i bin juk-im tubala ngawa-ngka.* (GK)
 3SG.S NF throw-TRN 2DU **water-LOC**
 "He threw those two **into the water.**" (FM061.D: LE: Frog story)
- (191) *karu jintaku-ngku im=in juk-im wumara hawuj-jirri.* (GK)
 child one-ERG 3SG=PST throw-TRN rock **house-ALL**
 "One kid threw a rock **at the house.**" (FHM121: CE: Allative pictures)
- (192) *ngawa-ngkurra waj yuwa-nana wumara.* (Gurindji)
water-ALL throw put-PRS.IM rock
 "He is throwing the rock **into the water.**" (FHM146: VD: Allative pictures)
- (193) *karu an warlaku bin baldan ngawa-ngka jirrupu.* (GK)
 child and dog NF fall **water-LOC** dive
 "The kid and dog fell **into the water** diving." (FHM145: CA: Frog story)
- (194) *jintaku ngumpit i=m jirrupu ngawa-ngkirri.* (GK)
 one man 3SG.S=NF dive **water-ALL**
 "One man dived **into the water.**" (FHM137: VB: Allative pictures)
- (195) *kartiya ngu jirrupu wani-nyana si-ngkurra.* (Gurindji)
 white.fella CAT dive fall-PRS.IM **sea-ALL**
 "The whitefella is diving **into the sea.**" (FHM151: ES: Allative pictures)
- (196) *yala-nginyi-ma nyawa jirrupu wani-nya si-ngka na.*
 that-ALL-DIS this dive fall-PST.PER **sea-LOC** DIS
 "After that, this one dove **into the sea.**" (FHM131: FO: Allative pictures)

8.5 The extension of local case markers in other Australian contact languages

Little has been written on the effect of contact on the use of peripheral case markers in other contact situations in Australia. Schmidt (1985b, p. 52 onwards) describes the replacement of locative and allative case marking with English prepositions in Young People's Dyirbal. However perhaps more interesting is Disbray's (2006) account of the functional shift in the allative case marker in Wumpurrarni English, a variety of Kriol spoken in Tennant Creek, which has retained some Warumungu case morphology, including the possessive case marker (see §6.4.3) and, of interest here, allative case morphology. Speakers of Wumpurrarni English use both Warumungu and Kriol forms to

mark topological relations and goals, and, though these spatial relations are distinguished in Warumungu, no distinction is made in Wumpurrarni English. The Kriol preposition *nanga*, which is a variety of *langa*, is the most wide-spread form as a marker of general location. Disbray finds that the Warumungu locative marker is no longer used in Wumpurrarni English; however the allative marker has spread into spatial domains previously marked by ergative/locative case (which are homonymous) in Warumungu. Thus the opposite process can be observed from Gurindji Kriol. Where the locative marker is beginning to be extended into goal marking constructions in Gurindji Kriol, the allative marker is increasing its functional spread in Wumpurrarni English. The reason for this difference probably resides in the slightly different distribution of locative and allative marking in Gurindji and Warumungu. For example, in Warumungu allative marking is used to mark location in transitive verbs (regardless of whether the location is an object or a whole event), whereas Gurindji uses locative marking. These constructions involve frequently occurring verbs such as *put*-type verbs. A full account of this difference is not within the scope of this thesis, but will be the source of further research on language change in case marking in Australian languages.

8.6 Conclusion

These applications of the dative preposition and locative case-marker in Gurindji Kriol are at once unique to this language system, and yet also represent aspects of both source languages in composite structures. These types of composite structures represent another outcome of the pressure between functionally equivalent systems in Gurindji and Kriol. In this situation, neither language dominates, with the result, a convergence between both languages in the form adopted and its distribution. This outcome differs from possessive marking where Gurindji clearly dominates in terms of the forms used in the mixed language (§6). Moreover the change in the distribution of dative marking in possessive constructions is not easily attributed to either source language. The previous chapter described a different form of compromise where locative case-marking and the locative preposition combine in a double-marked structure to encode topological relations. In this case, the distribution of locative marking is not in conflict - both source languages use

locative marking to express the same range of topological relations. Thus the compromise is expressed by the application of both forms of marking.

In the situation of goal marking, many more variants are available, and both languages distribute these forms differently according to the inherent semantics characteristics of the goal nominal, and how these nominals are grouped. This is perhaps why there are so many forms available to Gurindji Kriol speakers to encode goal nominals. This variation is a result of the discrepancies between the source languages in the form and distribution of goal marking, and perhaps represents a system that is still in a great deal of flux. Nonetheless, a convergence strategy which is also emerging favours neither language strongly. This form of compromise differs from that described for topological relations, because it involves both the form of goal marking and distribution of these forms. One source language provides the form, and the other contributes the structure, and the contact between the languages involves a re-mapping of form and structure. This re-mapping has gone in both directions in Gurindji Kriol. A Gurindji form - the locative case-suffix - has mapped onto a Kriol structure which does not distinguish between locative and goal marking, and conversely a Kriol form - the dative preposition - has mapped onto a Gurindji distribution of dative marking. Both system re-mappings seem to have occurred at different stages with the dative system apparently gone to completion, and the locative system still in flux, as shown in the persistence of the allative form.

In conclusion, this chapter has described the forms and distribution of goal marking in locomotion events in Gurindji and Kriol and the resultant mixed language. I have used this functional domain to demonstrate another result of contact between Gurindji case marking and functionally equivalent Kriol prepositions. What has been shown here is another path by which both languages contribute to a structure in the mixed language. A split between form and structure can be observed in goal constructions with the source languages supplying different aspects of this system.

9. ARGUMENT MARKING IN GURINDJI KRIOL⁸⁵

9.1 Introduction

The final outcome of competition between Gurindji and Kriol functional equivalents can be demonstrated in the argument marking system: a change in the function of the ergative marker from a suffix which marks structural case to one that encodes information structure. Argument structure is indicated by a split-ergative morphological system in Gurindji (§9.3.1) and by SVO word order in Kriol (§9.3.2). These two systems of argument marking were brought into contact and competition in the formation of the mixed language. Word order has emerged from this competition as the dominant system in the mixed language (§9.5). However, the Gurindji ergative case suffix has not disappeared. Though it contributes to argument disambiguation indirectly in much the same manner as animacy and world knowledge, its distribution has changed radically

⁸⁵ Versions of this chapter are in press:

Meakins, F. (forthcoming). The case of the shifty ergative marker: A pragmatic shift in the ergative marker in one Australian mixed language. In J. Barddal & S. Chelliah (Eds.), *The Role of Semantics and Pragmatics in the Development of Case*. Amsterdam: John Benjamins.

Meakins, F., & O'Shannessy, C. (forthcoming). Ordering arguments about: Word order and discourse motivations in the development and use of the ergative marker in two Australian mixed languages. *Lingua*. (Special issue on optional ergativity, Ed. B. McGregor and J-C Verstraete)

such that it bears little resemblance to its Gurindji source. Where the ergative marker marked transitive subjects categorically in Gurindji, Gurindji Kriol employs the ergative marker only variably on transitive subjects (A)⁸⁶, and it is also found marking subjects of intransitive clauses (S). Variable ergative marking is called *optional ergativity*, and has been observed in a number of Australian languages, both as a system internal to a language, and as the result of contact (§9.7). Many optional ergative languages report discourse motivations for the use of the ergative marker. Here I will also propose that the function of the Gurindji-derived ergative marker has been extended into the domain of information structure, specifically that the ergative marker is used to accord prominence to the agentivity of a subject.

The data for this chapter consists of 1917 transitive clauses and 116 intransitive clauses with overt nominal subjects from 39 speakers. The speakers are grouped into the same three age categories which are used in the other case studies: 6-15 year old (15 speakers), 16-25 year old (14 speakers), 26+ year old (10 speakers) (see also §1.6.1 for more details on these age groupings). As with the previous chapters, this subset of data is derived from a larger corpus of peer conversation, child-directed speech, picture-prompt narrative and picture-response elicitation games designed specifically for eliciting overt nominal and therefore ergative marking (see §1.6.2 for more information on methodology).

9.2 An overview of optional ergative marking in Gurindji Kriol

Optional ergative languages are characterised by "variation between the use and non-use of the ergative marker within its normal domain of application" (McGregor and Verstraete, 2005, p. 1) where the grammatical role borne out by A is not affected when the ergative marker is absent. The lack of categorical variation is the main difference between optional ergative languages and split ergative languages. In split ergative languages the domain of application may be defined in terms of part of speech - with subject nominals taking overt ergative marking and subject pronouns lacking this

⁸⁶ I use Dixon's (1979) syntactico-semantic distinctions of A (transitive subject), S (intransitive subject) and O (transitive object).

marking. In these languages, the ergative marker is obligatory in its domain of application, but in optional ergative languages it is not.

Optional ergative marking in Gurindji Kriol involves the variable application of the Gurindji-derived ergative case suffix to transitive subjects (A), and additionally the use of this marker on intransitive subjects (S). This pattern is typified by the following example, which is an excerpt of a Bird story told by an 18 year old woman (SS) to her three year old brother. Pictorially, this book describes the pursuit of a young bird by three boys, and the events that occur during the chase (see methodology section §1.6.2.1). SS includes her brother in the story, shown in the use of second person pronouns.

(197) (FM009.B: SS18yr: Bird story)

- (a) **WB an LD an nyuntu yumob bin jayijayi jurlaka na.**
 NAME and NAME and 2SG 2PL PST chase bird DIS
 "WB and LD and you, you lot were chasing the bird."
- (b) **WB-ngku baldan na karnti-ngku meik-im im baldan.**
 NAME-ERG fall.over DIS branch-ERG make-TRN 3SG.O fall.over
 "WB falls over because the branch trips him up."
- (c) **nyuntu an LD-tu jayijayi det jurlaka.**
 2SG and NAME-ERG chase the bird
 "So now you and LD chase the bird."
- (d) **nyuntu an LD-tu jayijayi jurlaka na.**
 2SG and NAME-ERG chase bird DIS
 "Yep you and LD chase the bird."
- (e) binij LD gon, **karnti-ngku turrp im fut-ta.**
 finish NAME go branch-ERG poke 3SG.O foot-LOC
 "That's it, LD treads on a splinter which goes through his foot."
- (f) i bin baldan **karnti** bin trip-im-oba im ...
 3SG.S NF fall.over branch NF trip-TRN-over 3SG.O
 ... nyawa-ma yu luk hiya.
 this-DIS 2SG look here
 "He falls over because the branch trips him up. This one, you look here."

In the first line, "WB an LD an *nyuntu*" is the subject of the transitive verb *jayijayi* (chase), however this nominal does not receive ergative marking. Yet when this verb is repeated in lines (c) and (d), ergative case is marked on the subject nominal. This variable use of the ergative marker is repeated in lines (e) and (f) with the inanimate subject, *karnti* (branch). Not only are these subject nominals variably marked, but the subject of the intransitive verb *baldan* (fall over) in (b) also receives ergative case. This excerpt exemplifies the use of the ergative marker in Gurindji Kriol.

9.3 Argument marking in Gurindji Kriol's source languages

Gurindji and Kriol use different systems for marking arguments. Gurindji uses morphological suffixes, including the ergative which marks the transitive subject. On the other hand, Kriol, like English, is basically a SVO word order language, where the pre-verbal position distinguishes the transitive subject from the object. Each system will be described in more detail below.

9.3.1 Gurindji

Gurindji Kriol derives its nominal morphology, including ergative case marking from Gurindji. Gurindji is a morphologically ergative language (Dixon, 1972, p. 122; 1994; Van Valin, 1981) with a split case marking system that follows a commonly observed division along free vs bound nominals (Dixon, 1994). Following Goddard's (1982) distinction between case form and case marking, Gurindji can be analysed as having a tripartite case system which distinguishes the three core case categories: ergative, nominative and accusative, which map onto the A, S and O argument respectively. Morphologically, however, there is a three way marking split between nouns, bound pronouns and free pronouns. An accusative marking pattern in the bound pronoun paradigm is the result of syncretism between the ergative and nominative case forms, and an ergative pattern in the noun system arises from syncretism between the nominative and accusative case forms. The case forms in the free pronouns are completely syncretised providing no marking distinction between the ergative, nominative and accusative categories. This split-ergative system is shown in Figure 34.

Figure 34 Core cases and their respective forms in Gurindji

CORE CASE	NOUN	BOUND PRONOUN	FREE PRONOUN
ERGATIVE (A)	- <i>ngku</i>	- <i>rna</i> (1SG)	<i>ngayu</i>
NOMINATIVE (S)	∅	- <i>rna</i> (1SG)	<i>ngayu</i>
ACCUSATIVE (O)	∅	- <i>yi</i> (1SG)	<i>ngayu</i>

Gurindji is typical of many non-configurational languages, such as Warlpiri, in that nominals are commonly ellipsed and are cross-referenced by pronominal clitics. These clitics attach to an auxiliary, for example *ngu*, which is most often found in second position. Word order is relatively flexible and largely dependent on information structure, with discourse prominent constituents presented in first position. All elements of the noun phrase are case marked. These features are demonstrated in (198). Ergative case marking is obligatory in transitive clauses, and optional in semi-transitive clauses, i.e. clauses where the object is marked dative (McConvell, 1996, p. 37). The nature of optional ergativity in semi-transitive clauses has not been documented. The ergative marker is also found on adverbs of manner, instruments (198), question nominals and coverbs in subordinate switch reference constructions.

- (198) *wirnanpurru₂* *karu-wali₁ja-ngku₁* *yapakayi-ngku₁* *ngu-lu₁-∅₂*
 kangaroo(ACC) **boy-PAUC-ERG** **small-ERG** AUX-3PL.S-3SG
- kayikayi* *pa-nana* *kurrupartu-yawung-kulu.*
 chase hit-PRS.IMP **boomerang-PROP-ERG**
 "The boys chased the kangaroo with a boomerang."

9.3.2 Kriol

In contrast to Gurindji, Kriol does not mark argument nominals morphologically, but through word order which it derives from English (Munro, 2005, p. 119). SVO word order is the pragmatically unmarked pattern, with deviations affecting the information packaging of the clause, as shown in (199) and (200). In the pronoun system, Kriol also behaves like English, using different forms to mark arguments on a nominative-accusative basis. As in Gurindji, Kriol nouns and pronouns may be elided. Thus, through

word order and pronoun case forms, the two grammatical roles of subject and object are encoded.

Figure 35 Core cases and their respective forms in Kriol

CORE CASE	NOUN	FREE PRONOUN
NOMINATIVE (A&S)	pre-verbal	<i>ai</i> (1SG)
ACCUSATIVE (O)	post-verbal	<i>mi</i> (1SG)

The following examples come from a Kriol speaker at Kildurk/Amanbidji, a community 400km north-west of Kalkaringi.

(199) det dog im bait-im det old man la arm.
 the dog 3SG bite-TRN the old man PREP arm
 "The dog bites the old man on the arm." (FHM096: CN35yr: Locative pictures)

(200) dis wan man det jinek im bait-im la arm.
 DEM one man the snake 3SG bite-TRN PREP arm.
 "It was the man whom the snake bit on the arm."
 (FHM096: CN35yr: Locative pictures)

9.4 Argument marking in Gurindji Kriol

In the process of the formation of Gurindji Kriol, the argument marking systems from Gurindji and Kriol came into contact. The case system from Gurindji and word order from Kriol were recognised as functional equivalents, and competition between these systems ensued. The competition between these Gurindji and Kriol elements differs somewhat from that discussed in the previous chapters. Where competition was observed between equivalent *forms* such as the Gurindji locative case suffix and the Kriol locative preposition (see §7), here two *systems* vie for dominance. The result of contact and competition in argument marking has not been the replacement of one element with another and the subsequent disappearance of the equivalent from the weaker language, an outcome which was observed for dative markers in Gurindji Kriol possessive constructions (see §6). Competition has also not resulted in the convergence of both systems to produce a composite form such as those found in goal constructions (see §8).

Instead, the competition has resulted in two outcomes: (i) the dominance of word order, and (ii) the optionality of the ergative marker. SVO word order is the dominant pattern, with **87.5%** of transitive clauses configured SVO. Additionally, transitive subjects are no longer categorically marked ergative, with only **66.5%** of A nominals receiving the ergative suffix. These figures are based on the Gurindji Kriol dataset of 1917 transitive clauses described in the introduction. This section will discuss each of these outcomes and the implications for argument marking in Gurindji Kriol.

The first result of the functional competition between ergative marking and word order is the predominance of SVO word order in Gurindji Kriol, illustrated in (201). Only 12.5% of A nominals are found following verb. Of these, 94.5% are found with an ergative marker, an example of which is shown in (202). This relationship is quantified in more detail in §9.5.3.

(201) *jintaku karu-ngku i bin jut-im kengkaru mirlarrang-yawung.*
 one child-ERG 3SG.S NF shoot-TRN kangaroo spear-PROP
 "One kid shot the kangaroo with a spear." (FHM185: AC11yr: Ergative pictures)

(202) *an kengkaru i bin kil-im kurrupartu-yawung det karu-ngku.*
 and kangaroo 3SG.S NF hit-TRN boomerang-PROP the child-ERG
 "And the kid hit the kangaroo with a boomerang."
 (FHM182: AC11yr: Ergative pictures)

The second result of contact between these systems of argument marking is the optionality of the ergative marker. This system was characterised in §9.2 by the optional application of the ergative marker to transitive subjects. Further examples are given in (203) and (204). Both sentences were uttered by the same speaker in the same picture-match peer elicitation session. The agent, verb, patient, and word order are almost identical, however the sentences differ according to the application of the ergative marker, present and not present respectively⁸⁷.

⁸⁷ Note that the other difference between these sentences is the language of the nominal stem - Gurindji in (203), and Kriol in (204). One hypothesis may be that the Gurindji-derived ergative marker is found more often with Gurindji stems. In §9.5, I test the presence of the ergative marker against the language of the stem, among other variables, and found it not to be significant. This variable is discussed further in §9.5.1.

- (203) *kajirri-ngku* i=m *purlk-karra* kengkaru.
woman-ERG 3SG.S=NF pull.guts.out-CONT kangaroo
 "The woman is pulling the guts out of the kangaroo."
 (FHM057: SS18yr: Ergative Bingo)

- (204) **det man** i=m *purlk-karra* kengkaru.
the man 3SG.S=NF pull.guts.out-CONT kangaroo
 "The man is pulling the guts out of the kangaroo."
 (FHM057: SS18yr: Ergative Bingo)

The other feature of optional ergativity in Gurindji Kriol is the optional use of the ergative marker on intransitive subjects, as shown in (205). In this example, the intransitive verb, *plei* (play) takes an ergative-marked subject (and a proprietive-marked adjunct "with the dog"). In Gurindji, an ergative marker would never be found marking the subject of an intransitive clause.

- (205) *karu-ngku* i=m *plei-bat-karra* *warlaku-yawung*.
child-ERG 3SG.S=NF play-CONT-CONT dog-PROP
 "The child plays with the dog." (FM017.C: RR23yr: Monster story)

The three core case categories of Gurindji are still distinguished through morphological marking, though a tendency towards the Kriol bipartite system can be observed with the ergative marker beginning to appear on subjects of intransitive verbs (S), and optionally on transitive subjects (A). Unlike Gurindji, only two nominal word classes are discernable, because the Gurindji free pronouns are not grammatically differentiated from the nouns. The Gurindji bound pronoun system has also been completely replaced by the Kriol pronoun paradigm (see §A1.8).

Figure 36 Core cases and their respective forms in Gurindji Kriol

CORE CASE	NOMINAL	PRONOUN
ERGATIVE (A)	*(-ngku) + allomorphs	ai (1SG)
NOMINATIVE (S)	*(-ngku) + allomorphs	ai (1SG)
ACCUSATIVE (O)	Ø	mi (1SG)

* brackets indicates optional marking

Dixon (1979, p. 69) suggests that the fundamental role of case systems is to distinguish between the three arguments: A, S and O. Indeed the main system used to disambiguate arguments in Gurindji is the ergative marking system (§9.3.1). However optional ergativity in languages such as Gurindji Kriol presents problems for this analysis of ergative marking, suggesting that the language must be using other or additional means to distinguish the A, S and O roles. For example, Dixon (1979, p. 72) observes that in the Austronesian language of Motu, ergative marking is essential in a transitive sentence such as "The boy saw the girl", however it is not obligatory in "The snake bit the boy". World knowledge about agents and their behaviour is sufficient to identify the likely agent. Blake (1976, p. 284; following Walsh, 1976, p. 405) also suggests that other grammatical features may lend themselves to the task of disambiguation. In Murrinh-Patha, information about person, number and gender in co-referential subject and object pronoun prefixes, helps identify the nominal arguments. Here the ergative suffix is more likely to be used when A and O have similar person, number and gender values.

I suggest that, in the competition between the Gurindji and Kriol argument marking systems, word order became the main system of distinguishing arguments, which is why the ergative marker has been rendered non-obligatory. The functional load of argument marking is borne by word order rather than the ergative marker. For example, though the ergative marker is not present in (204), there is no problem in identifying the A role as it appears pre-verbally. However A nominals do not always appear in the pre-verbal position, for information structure reasons discussed in §9.6. In this situation, ergative case marking and other elements, such as the animacy of participants, cross-referencing pronouns, context and word knowledge, play an role in the disambiguation of arguments.

For instance, in (206) the agent NP, "the three boys", occurs after the verb "chase", (the object being a non-overt NP, "the bird"). Nonetheless, the meaning of the sentence is not affected, suggesting that factors other than word order or the ergative marker can be brought to the task of identifying the agent in this case.

- (206) dei bin *kayikayi* im **jirri-bala malyju.**
 3PL.S NF chase 3SG.O **three-NMZ boy**
 "They chased it (the bird), **the three boys.**" (FM011.A: SS18yr: Bird story)

Number information marked on pronouns is one factor which may be used to identify the A nominal. In (206), the A nominal and cross-referencing pronoun are both plural, "the three boys" and "they". The relative animacy of the nominals can also help identify the "three boys" as the perpetrators, rather than the victims, of the act of chasing. The boys, as humans, are more likely to be agents than non-human subjects. Another example where animacy contributes to the identification of the A nominal is given in (207) below. In this utterance two unmarked post-verbal nominals are used: "biscuit" and "this crocodile". However there is little problem in assigning them A and O roles because one is animate and the other inanimate, with animates more likely to act on inanimates.

- (207) i=m hab-im-bat-*karra* biskit **nyawa krokodail.**
 3SG.S=NF eat-TRN-CONT-CONT biscuit **this crocodile**
 "The crocodile's eating the biscuit." (FM007.C: JA39yr: Conversation)

The relative animacy of the participants in a transitive clause may not provide enough information to disambiguate A and O. In situations where a lower order animate A nominal acting on a human patient is found in the post-verbal position, context and world knowledge can be brought to the task of identifying the A nominal. For example, in (208) the speaker is playing with a crocodile hand puppet, telling her granddaughter that it is biting her. The agent, *kakkak* appears post-verbally without an ergative marker. However there is no problem identifying the agent. The word *kakkak* is a general baby-talk word that only refers to dangerous animals, particularly of the biting and stinging kind, and the

speaker performs the event with the hand puppet as she says the sentence so there is little doubt about who the biter is.

- (208) *katurl* *yu* *bait-im* *kakkak* *deya* *bait-im* *katurl* *kakkak*.
 bite 2SG bite-TRN **animal** there bite-TRN bite **animal**
 "It's biting you **this animal**, there biting **this animal**."
 (FM006.A: SU41yr: Conversation)

Despite its optionality, ergative marking may still be employed for the purpose of distinguishing A from O. For example, where A is post-verbal and both A and O are overt and of equal animacy, the ergative marking is always found, and is the only element of the clause which distinguishes A from O. This type of construction is exemplified in (209).

- (209) *kajirri* *nurt* *im* *ngumpit-tu*.
 old.woman squash 3SG.O **man-ERG**
 "The **man** sits on the woman." (FHM102: RR23yr: Ergative pictures)

Indeed, as was shown above, regardless of animacy and other clausal features, ergative marking is almost completely categorical in the post-verbal position. 94.5% of A nominals found post-verbally are marked ergative. This high use of the ergative marker may suggest that word order and ergative marking exist in a complementary relationship, with the ergative marker retaining its original function in a limited capacity, namely when the subject is post-verbal. However 62.5% of preverbal A nominals are also found with the ergative marker where word order is sufficient for argument discrimination. For example in (210) the ergative marker is used despite the clear identification of the A nominal by word order (and indeed relative animacy):

- (210) *marluka-ngku* *bin* *put-im* *neim* *board-ta*.
old.man-ERG NF put-TRN name board-LOC
 "The **old man** wrote his name on the board."
 (FHM175: AR19yr: Ergative bingo)

Thus, though the ergative marker plays some discriminatory role, this factor alone does not explain the function of this case suffix. Similarly, McGregor problematises the discrimination argument for Gooniyandi, observing that many ergative markers occur where A is easily identified.

It can be shown that the discriminatory function alone cannot account for the occurrence of the ergative postposition in Gooniyandi ... Investigations of Gooniyandi narratives reveal many instances of the ergative postposition in transitive clauses where there is no possibility of confusion between the two roles. (McGregor, 1992, p. 276)

Gooniyandi also contains cross-referencing pronouns which can be used to distinguish arguments. McGregor (1998, p. 495) notes examples where these cross-referencing pronouns are sufficient for this function, nonetheless the ergative marker is also present. Another argument against suggesting that the ergative's sole function is argument disambiguation is its appearance on subjects of intransitive clauses (S). This phenomena has also been reported in a number of optional ergative languages, for example Tibetan (Vollmann, 2005, p. 208), Batsbi/Tsova-Tush, a north east Caucasian language (Davison, 1999, p 183), and Kuuk Thaayorre, a north Queensland language (Gaby, forthcoming, p. 6). In Gurindji Kriol, despite the fact that only one argument is present in intransitive clauses and therefore not in need of disambiguation, S is variably marked ergative in these languages, as was shown in (151)(b) and (205).

I suggest that, though the ergative marker plays a role in differentiating arguments, its primary function is not in this domain. This argument is illustrated by the other elements of the clause which are also employed to distinguish arguments, but whose primary function is something other than argument marking. For example, animacy is a semantic feature of a nominal rather than a syntactic feature which has evolved for argument marking. However animacy, specifically the relative animacy of nominals, is a feature which lends itself to this task in situations where word order cannot be relied upon. I suggest that the ergative marker can be analysed in a similar manner. Because the

ergative suffix continues to be found marking only subjects⁸⁸, albeit transitive and intransitive subjects, this feature allows it to be employed in the process of argument disambiguation. However this use does not entail that distinguishing arguments is the primary function of the ergative marker. The following sections explore the shift in the function of ergative marking in Gurindji Kriol.

9.5 Factors motivating the appearance of the ergative marker in Gurindji Kriol

If the primary function of the ergative marker is not argument disambiguation, the question is: what is being encoded in the use or non-use of the ergative marker in Gurindji Kriol? A number of factors, including animacy, word order and aspect, have been reported elsewhere in the literature as affecting the use of ergative morphology in split ergative and optional ergative languages (see §9.5.2 onwards and §9.7). These variables and others were coded in all transitive clauses in the Gurindji Kriol corpus which contained an overt nominal subject. In all, 1917 clauses were coded for the dependent variable: *the presence of an ergative marker*, then 10 independent variables: 2 sociolinguistic variables - *age of speaker* and the *formality of context*; a lexical variable - the *language of stem*; a number of grammatical and semantic variables relating to the degree of transitivity of the clause: *potentiality*, *actualisation of the event indicated by the verb*, *A animacy*, *O animacy*, and *whether O is overt*; and finally two variables which relate to the clause structure: *the position of A in relation to the verb*, and *the presence of a co-referential pronoun*. The dependent variable was then tested against the independent variable, with speaker identity included as a random variable.

⁸⁸ Unlike Gurindji the ergative marker is not used to mark instruments in Gurindji Kriol, with the Gurindji-derived proprietive marker used for this function (§A1.6.3.2.6).

Dependent variable:	ergative marker	(+/- ERG is present)
Independent variables:	age	(3 categories B=6-15yr, C=16-25yr, D=26+yr)
	formality	(3 categories: conversation, narrative, elicitation)
	language of stem	(3 categories: Gurindji, Kriol, proper name)
	actualisation	(+/- auxiliary present)
	continuative	(+/- CONT suffix present)
	A animacy	(+/- A is animate)
	O animacy	(+/- O is animate)
	O overt	(+/- O is overt)
	A position	(+/- preverbal)
	co-referential pronoun	(+/- subject pronoun)
Random variables:	speaker	(one of 39 speakers)

A full table of results will not be given here, but will be presented in sections as the relevant independent variables are discussed below. A full version of the statistical output can be found in §A5. Of these variables, 5 correlated significantly with the appearance of the ergative marker. Nominals which are either *inanimate* ($p < 0.01$), *post-verbal* ($p < 0.001$), or occur with a *co-referential pronoun* ($p < 0.001$) are more likely to be found marked with the ergative suffix. Two factors had negative z values indicating an inverse relationship with the use of the ergative marker. The ergative marker is less likely to be present when the verb is marked with a *continuative* suffix, or occurred in conjunction with a *potential* modal verb. A discussion of these results follows, including the factors which do not affect the use of the ergative marker, and the factors which do. An interpretation of these results is given in §9.6 onwards.

9.5.1 Sociolinguistic, register and lexical variables

The age of the speaker, the formality of the context of the utterance, and the language of the A nominal do *not* affect the appearance of the ergative marker.

The *age of the speaker* was a significant factor in the choice of locative marking in topological relations (§7.4.2) and dative marking in possessive constructions (§6.4.2). However this independent variable does not affect the use of ergative marking in transitive clauses. The application of the ergative marker relative to three age groups (5-15 yrs, 16-25 yrs, and 26+ yrs) is given in Figure 37. A decrease in the use of the ergative marker can be observed across these age groups. The 6-15 yr old group mark the A nominal in 59.5% of cases, compared with 16-25 year olds who use ergative marking 67.3% of the time, and the 26+ speakers 76.7% of the time. Though there is some variation in ergative marking across these age groups, these generational differences are not significant. Thus it can be concluded that these age groups share a relatively uniform ergative marking system.

Figure 37 *Appearance of ergative marker according to age*

	B (6-15yr)	%	C (16-25yr)	%	D (26+yr)	%	Total	%
ERG	273	59.5%	823	67.3%	181	76.7%	1277	66.5%
No ERG	185	40.5%	400	22.7%	55	22.3%	640	33.5%
Total	458		1223		236		1917	

The *formality of the context* was also not a motivating factor in the use of ergative marking in Gurindji Kriol. The context, where a transitive clause is elicited, introduces a range of pragmatic variables which may affect ergative marking. For example, in more formal elicitation, speakers may be more self-conscious about their use of language, and may produce clauses which they consider to be more grammatically correct. Elicitation also strips away many conversation or narrative cues, such as topic continuity, which may have some bearing on the use of ergative marking. In other languages, the speech style or genre seems to affect the use of the ergative marker, particularly in more formal

elicitation. For instance in Gooniyandi, McGregor (1992, p. 280) claims that speakers almost never use the ergative in elicitation except where A is inanimate, whereas in Kuuk Thaayorre elicitation, speakers use the ergative on almost 100% of A nominals, and also correct the non-use of the ergative in sentences played back to them (Gaby, forthcoming, p. 15). With these potential effects in mind, all Gurindji Kriol transitive clauses were coded for their textual origin - whether from a conversation, narrative or elicitation text (see §1.6.3.1). The results are given in Figure 38. The ergative marker is used uniformly across conversation (66%), narrative texts (65%) and elicitation (67.5%), with no significant differences.

Figure 38 Appearance of the ergative marker according to formality of context.

	Conversation	%	Narrative	%	Elicitation	%	Total	%
ERG	225	66	396	65	656	67.5	1277	66.5%
no ERG	116	34	212	35	312	32.5	640	33.5%
Total	341		608		968		1917	

Another possible influence on the appearance of the ergative marker is the *language of the stem*. It is often the case in code-switching and borrowing that inflectional morphology is brought into the matrix language via a stem of the same language origin. (Thomason & Kaufman, 1988, p. 74). Indeed switching between stems and suffixes was uncommon in the Gurindji-Kriol code-switching of the 1970s (§5.2.3). Thus, because the ergative marker is derived from Gurindji, it may be predicted that it is more likely to appear with a Gurindji stem rather than a Kriol stem. It is certainly the case that in the neighbouring mixed language, Light Warlpiri, such an effect may be observed (Meakins & O'Shannessy, 2006). The A nominals were coded for whether they are derived from Gurindji or Kriol. Proper names were also coded separately. As is shown in Figure 39 below, the ergative marker appears on both Gurindji and Kriol stems in 67.5% of cases. Where a proper name is the stem, the ergative marker was used less frequently (55%), however this difference is not significant. Thus the language of the stem does not motivate the presence of the ergative marker in Gurindji Kriol.

Figure 39 Appearance of the ergative marker according to the language of the stem.

	Gurindji	%	Kriol	%	Name	%	Total	%
ERG	799	67.5	388	67.5	90	55	1277	66.5%
no ERG	381	32.5	186	32.5	73	45	640	33.5%
Total	1180		574		163		1917	

9.5.2 Transitivity variables

The second cluster of factors, which was tested, relates to the degree of transitivity of the clause: continuative, actualisation, A animacy, O animacy and O overtness. These features are derived from Hopper and Thompson's (1980) work on degrees of transitivity. Hopper and Thompson do not define transitivity as a simple binary value, \pm transitivity, rather they measure transitivity in terms of a continuum. For them, transitivity is the degree to which an event is carried over or transferred from one participant to another (1980, p. 253). The degree of transitivity of a clause is measured as the sum of the interaction between its three constituents - the agent, patient and action - which is calculated through its component parts. These components are summarised in Figure 40:

Figure 40 Hopper and Thompson's (1980, p. 252) components of transitivity

	COMPONENT	HIGH TRANS	LOW TRANS
A.	PARTICIPANTS	2 OR MORE	1 PARTICIPANT
B.	KINESIS	ACTION	NON-ACTION
C.	ASPECT	TELIC	ATELIC
D.	PUNCTUALITY	PUNCTUAL	NON-PUNCTUAL
E.	VOLITIONALITY	VOLITIONAL	NON-VOLITIONAL
F.	AFFIRMATION	AFFIRMATIVE	NEGATIVE
G.	MODE	REALIS	IRREALIS
H.	AGENCY	A HIGH	A LOW IN POTENCY
I.	AFFECTIVENESS OF O	O TOTALLY AFFECTED	O NOT AFFECTED
J.	INDIVIDUATION OF O	O HIGHLY	O NON-INDIVIDUATED

Hopper and Thompson (1980, p. 268) suggest that the ergative clause signals a number of the transitivity features and can be characterised by its correspondence to perfective aspect (C), the total affectiveness of O (I), kinetic/volitional nature of the verb (B and E), and the active participation of A (H). I will discuss each of these in turn in relation to the

Gurindji Kriol data and the use of the ergative marker. Unfortunately, one of these variables, which relates to semantics of the verb in terms of kinesis and volitionality, was unable to be included in the statistical analysis due to an interaction between this variable and A animacy. For example, perception verbs always contain animate subjects⁸⁹.

The first transitivity feature, which Hopper and Thompson relate to the ergative construction, is perfective aspect. Perfective aspect indicates that the action denoted by the clause has come to completion thereby increasing the transitivity of the clause. Perfective aspect is not marked in Gurindji Kriol, however continuative aspect is. A corresponding prediction about the ergative marker and continuative aspect might be that the ergative appears less in progressive clauses where an action has not come to completion. Indeed Schultze-Berndt (2000, p. 172) notes that the ergative case suffix is almost completely absent from progressive constructions in Jaminjung, a language spoken around Timber Creek just north of the Ngumpin languages and Gurindji Kriol (see map). Similarly McGregor (1992, p. 286) observes that the use of ergative marking in Gooniyandi decreases when an action is presented as ongoing. Blake (1976, p. 286) makes a similar observation for Kalkatungu where imperfect constructions often lack an ergative marker. Continuative aspect in Gurindji Kriol is marked on the main verb using the Gurindji-derived *-karra* suffix or the *-bat* suffix from Kriol, or a combination of these suffixes (see §A1.11.5.3 for an explanation of the distribution of these suffixes). All Gurindji Kriol transitive clauses were coded for the presence of a continuative suffix to determine whether a correlation exists with the ergative marker. The results are shown in Figure 41. A negative z value indicates that the ergative appears significantly less when a continuation suffix was present ($p > 0.001$). In all, 58.7% of clauses which contained a continuative marker also used an ergative marker. Thus, although the ergative marker is more likely to appear than not, it is used significantly less than the overall use of ergative

⁸⁹ This interaction is unfortunate, as some effect may have been predicted. For example, in Samoan, a class of less active verbs, such as perception verbs, is distinguished by the absence of ergative marker (Hopper & Thompson, 1980, p. 270). Less strongly, but similarly, in Gurindji the 'say, tell' verbs which are less active take an unmarked subject and a dative-marked object (McConvell, 1996, p. 87). Ergative marking is only optional in these constructions, though McConvell does not speculate about the circumstances of its appearance. McGregor makes similar claims about Gooniyandi and the use of the ergative marker in what he calls 'middle' clauses (speech, moving up to someone, seeking) (1992, p. 301).

marking. An example of a clause containing an unmarked A nominal in conjunction with continuative aspect is given in (211), and the inverse in (212).

Figure 41 Appearance of the ergative marker according to continuative aspect

	Continuative	%	Non-Continuative	%	Total	%
ERG	233	58.7	1044	68.7	1277	66.5
no ERG	164	41.3	476	31.3	640	33.5
Total	397		1520		1917	

(211) an det *warlaku* i=m *warlakap-karra* botl-ta walyak.
 and the **dog** 3SG.S=NF look.around-CONT bottle-LOC inside
 "And **the dog** is searching (for the frog) inside the bottle."
 (FHM163: AN13yr: Frog story)

(212) *warlaku* an *karu-ngku* dei *warlakap* bo det *ngakparn*.
 dog CONJ child-ERG 3PL.S **search** PREP the frog
 "The dog and **the child** search for the frog." (FHM144: LS20yr: Frog story)

The *actualisation* of an event was also measured against the presence of the ergative marker. This category relates to another of Hopper and Thompson's transitivity features, the distinction between irrealis and realis mood. This distinction is defined in terms of "the opposition between indicative and such non-assertive forms as subjunctive, optative, hypothetical, imaginary, conditional etc", and Hopper and Thompson (1980, p. 277) suggest that the irrealis state corresponds to a lower degree of transitivity. Indeed in other Australian languages such as Kalkatungu and Pitta-Pitta "the ergative construction is not used if the verb is irrealis or future" (Blake, 1976, p. 286). The category of actualisation overlaps with ir/realis to a certain extent. Here, it is defined as the actual or potential occurrence of an event, with the latter corresponding to a lower degree of transitivity. The actual occurrence of an event is indicated by the tense of the clause, and the potential occurrence of an event is indicated by the future tense morpheme *garra*, and also modal auxiliaries such as the deontic *garra* (<got to = must), and *labta* (<have to = must) and the epistemic modal *maiti* (might) (see §A1.11.3). Each transitive clause was coded for whether the event indicated by the verb in the clauses actually occurred or only potentially occurred. The results are summarised in Figure 42. A significant correlation

between the non-appearance of the ergative (negative z value) and actualisation was observed in the data (48.7%, $p < 0.001$), suggesting that a clause with a lower degree of transitivity is less likely to be ergative marked. For example, in (213) the activity of collecting bush nuts is marked as an event which will occur in the future, and has not already taken place. No ergative marking is found in this clause. Where an event has come to completion, such as in (214), the use of ergative marking is not affected, but remains optional.

Figure 42 Appearance of the ergative marker according to actualisation

	Potential	%	Non-potential	%	Total	%
ERG	37	48.7	1240	67.3	1277	66.5
no ERG	39	51.3	601	32.7	640	33.5
Total	76		1841		1917	

(213) *ngayu garra ged-im tu partiki-waliya.*
 1SG FUT get-TRN too nut-PAUC
 "I'm going to gather a big mob of nuts." (FM058.C: CE25yr: Conversation)

(214) *kajirri-ngku i=m ged-im ngamanpurru.*
 old.woman-ERG 3SG.S-NF get-TRN conkerberry
 "The old woman gathers some conkerberries."
 (FHM175: AR19yr: Ergative bingo)

As was noted above, Hopper and Thompson (1980, p. 268) suggest that the ergative also signals the active participation of A. This factor may be measured in terms of the semantic feature of *animacy*. Animacy is a commonly observed factor motivating the appearance of the ergative marker in both *split* ergative and *optional* ergative languages. First, splits in ergative languages, where some elements are case-marked ergative and other elements pattern accusatively, are often determined by what Silverstein (1976, p. 113) calls the "inherent lexical content" of the arguments. A hierarchy of features, now called the 'animacy hierarchy', is based on this lexical content of the arguments, and determines the nature of the marking split. Silverstein (1976, p. 117) initially draws a distinction between speech act participants (first and second person) and non-speech act participants (third person). Within the last category, arguments are categorised according

to their semantic features such as \pm human, \pm inanimate, proper/common noun and \pm kin term (p. 122). Languages differ as to where the split occurs on this hierarchy. Van Valin (1992, p. 23) summarises the animacy hierarchy as follows:

1st & 2nd person > 3rd human > 3rd nonhuman animate > 3rd inanimate > others

Gurindji is an example of a split ergative language where the nominals pattern ergatively and the co-referential bound pronouns use an accusative system (McConvell, 1996, p. 56)⁹⁰. This split occurs between the nominal and pronominal clitic system rather than within the nominal system, therefore providing few clues as to the origin of the animacy effect in Gurindji Kriol. Other Australian languages that are optional ergative languages do display animacy effects. For example, an almost obligatory marking of inanimate transitive subjects has been observed in Umpithamu (Verstraete, 2005) and Gooniyandi (McGregor, 1992, p. 275), and Gaby (forthcoming, p. 13) observes a weaker association in Kuuk Thaayorre.

To determine whether animacy plays a role in the appearance of the ergative marker in Gurindji Kriol, A and O⁹¹ arguments were coded for animacy. The *relative animacy*⁹² of the subject and object was originally coded, however due to its dependence on its source variables - A animacy and O animacy - the statistical analysis was problematic and therefore this variable was not included in the analysis. The results are shown in Figure 43. Where A was animate, the ergative marker was used 65.4% of the time. The distribution of the ergative marker is similar regardless of whether an object is animate

⁹⁰ Though see §9.3.1 for a discussion of Goddard's distinction between case marking and case form in relations to Gurindji.

⁹¹ O was coded for animacy regardless of whether it was overt or not.

⁹² Relative animacy was measured according to the combined animacy of A and O. A and O were coded for the feature \pm animate. Relative animacy was then calculated as the *difference* between A and O animacy, with zero representing neutral relative animacy (an animate acting on another animate, A>A, and I>I).

-1	I>A
0	A>A, I>I
+1	A>I

In an exploratory test, relative animacy was included in the analysis and A and O animacy excluded. This variable was not found to be statistically significant, therefore its exclusion from the final analysis seems reasonable.

(66.4%) or inanimate (67%). However the relationship between an inanimate A nominal and the presence of the ergative marker is significant (78.3%, $p < 0.01$). Where the A nominal is inanimate, there is an increased likelihood of the use of the ergative marker. Examples (215) and (216) below illustrate the optional nature of the ergative marker with respect to the animacy of the A nominal. The A nominal is animate in (215) and not marked ergative, and (216) is typical of inanimate preverbal subjects. The A argument, *karnti* "the stick" is ergative marked.

Figure 43 Appearance of the ergative marker according to A animacy

	A animate	%	A inanimate	%	O animate	%	O inanimate	%	Total	%
ERG	1143	65.4	134	78.3	783	66.4	494	67	1277	66.5
no ERG	603	34.6	37	21.7	396	33.6	244	33	640	33.5
Total	1746		171		1179		738		1917	

(215) *nyawa yapakayi gel im=in turrp im ... nidl-jawung.*
this small girl 3SG=PST poke 3SG.O needle-PROB
 "This small woman (nurse) jabbed her with a needle."
 (FHM125: LE18yr: Ergative pictures)

(216) *karnti-ngku turrp im fut-ta.*
stick-ERG poke 3SG.O foot-LOC
 "The stick jabbed him in the foot." (He trod on a stick, and it went into his foot)
 (FM009.B: SS18yr: Bird story)

9.5.3 Clausal variables

Two clausal features were included in the analysis: *the position of the A nominal in relation to the verb*⁹³ and *the presence of a co-referential pronoun*. Both of these

⁹³ In an earlier exploratory study, the position of the A nominal with respect to the O nominal was tested. However because of the overlap between this clausal feature and A order in relation to the verb, it is difficult to determine the meaning of a significant result. For example if ergative marking is used in conjunction with a VOA order, it is difficult to determine whether the ergative marking is a result of A's position with respect to O or V, or indeed both. Due to the nature of this problem, this factor could not be included in the final analysis. The position of A with respect to O could have been chosen as the word order unit of analysis, however given that the main word order pivot in Kriol is the verb, this is the focus of the word order analysis.

variables were found to be significant, indicating that they affect the appearance of the ergative marker in Gurindji Kriol.

First, a relationship between word order and ergative marking has been observed in other language contact situations in Australia. For example, the ergative marker is not used categorically by younger speakers of Dyirbal who mix their language with English. Schmidt (1985b, p. 133) attributes the optionality of the ergative marker to the adoption of English SVO word order which contributes to the ever increasing redundancy of the ergative case suffix as a marker of grammatical relations. Other correlations between word order and ergative marking have been noted in the Warlpiri spoken by children at Yuendumu (Bavin & Shopen, 1985) and Lajamanu: Light Warlpiri (O'Shannessy, 2005) which will be discussed in §9.7.

As was discussed in §9.4, the predominant word order in Gurindji Kriol is an SVO pattern (87.5%), which it derives from Kriol. Word order may be predicted as a significant effect. One of the results of contact between Gurindji and Kriol in the formation of the mixed language is functional competition between the Gurindji and Kriol systems of argument marking, case marking and word order respectively. To investigate whether word order does affect the appearance of the ergative case suffix, the A nominals were coded for their position in relation to the verb. Figure 44 displays the results of this analysis, showing that the correlation between the ergative marker and post-verbal position is significant. Though the ergative suffix is found on 62.8% of all pre-verbal A nominals, it is almost always present in the post-verbal position (94.7%, $p < 0.001$). This distribution is shown in examples (217) and (218), where a preverbal A nominal occurs without ergative marking, and in an equivalent sentence where the A nominal is found post-verbally and is marked ergative.

Figure 44 Appearance of the ergative marker according to A position

	Preverbal	%	Postverbal	%	Total	%
ERG	1055	62.8	222	94.7	1277	66.5
no ERG	630	37.2	10	5.3	640	33.5
Total	1680		237		1917	

(217) an **imyu** bin teik-im *jarrpip* wan *karu*.
 and **emu** NF take-TRN carry a child
 "And **the emu** carried the child." (FM045.D: CE25yr: Crocodile story)

(218) i bin teik-im *jarrpip* najan *kapuku-ngku-ma nganta*.
 3SG.S NF take-TRN carry another **sister-ERG-DIS** DOUBT
 "And I reckon **the other sister** carried him now."
 (FM045.D: CE25yr: Crocodile story)

The final variable which was tested in this analysis was the presence of a co-referential subject pronoun (regardless of person). As is shown in Figure 45, the correlation between the use of the ergative marker and the co-referential pronoun is significant ($p < 0.001$). Where a co-referential pronoun is found, there is a greater likelihood of also finding an ergative case suffix. 81.4% of A nominals which occurred in conjunction with a co-referential pronoun were marked ergative compared with 54.6% of A nominals which were not found with an ergative marker. (219) and (220) below illustrate this distribution of case marking. In (219), the A NP *jintaku kajirri* (one old woman) does not occur with an ergative marker or with a co-referential pronoun, and (220) is an example of a nominal A with a co-occurring pronoun. The A nominal is ergative-marked in this example. This pattern of use relates to the discourse meaning associated with a dislocated nominal and will be discussed in §9.6.

Figure 45 Appearance of the ergative marker according to co-referential pronoun

	Coref Pro	%	No Coref Pro	%	Total	%
ERG	888	84	389	45.3	1277	66.5
no ERG	170	16	470	54.7	640	33.5
Total	1058		859		1917	

(219) *jintaku kajirri* fil-im-ap *ngapulu* kap-ta.
one old.woman fill-TRN-up milk cup-LOC
 "One old woman fills the cup up with milk."
 (FHM136: TJ22yr: Locative pictures)

(220) det *gel-tu i=m* fil-im-ap-*karra ngawa* pleit-ta.
 DET **girl-ERG 3SG.S=NF** fill-TRN-up-CONT water plate-LOC
 "The girl is filling up the plate with water." (FHM156: KS13yr: Locative pictures)

In conclusion, of the 10 independent variables, 5 were found to significantly affect the distribution of ergative marking in Gurindji Kriol. These variables include a number of transitivity features - the use of continuous aspect, the actualisation of an event denoted by the verb and the animacy of the A nominal - and two clausal features - the position of A with respect to the verb and the presence of a co-referential pronoun. Thus the likelihood that an ergative marker is used increases if A is inanimate, found post-verbally and in conjunction with a co-referential pronoun. The combination of these features further increases the chance of finding ergative marking. The use of the ergative marker decreases when the verb is marked with continuous aspect and the event denoted by the verb has not come to completion⁹⁴. At first glance, these factors appear to be a disparate cluster. However, in the next section, I will argue that these variables contribute to a unified account of the ergative suffix as a discourse marker which accords discourse salience to the agentivity of the entity denoted by a subject nominal.

⁹⁴ Note that these statements are probabilistic rather than absolute. Variation is both expected and present, as will be discussed further in §10.3.

9.6 The ergative marker and information structure

Although the role of the ergative marker in Gurindji is primarily syntactic, this case suffix has not been perfectly replicated in the process of mixed language genesis. The adoption of SVO word order to mark argument structure in Gurindji Kriol and a shift in the categorical application of the ergative marker both indicate that a shift in the function of this case suffix has occurred. As the previous section demonstrated, the distribution of the ergative marker is influenced by a number of transitivity and clause structure variables. In this section, I suggest that the ergative marker shapes the information structure of a clause by highlighting the agentivity of the subject nominal, both transitive and intransitive. Whilst this notion of discourse salience appears to relate to the concept of "focus", in its various instantiations, I follow Choi's (1999) analysis of topic and focus where discourse prominence is analysed as just one component of these two elements of information packaging. I begin by demonstrating how each variable discussed in the previous section contributes to this overall picture of the ergative, and finally discuss the use of the ergative marker in a number of domains of application including contrast (§9.6.1), newness (§9.6.2), left (§9.6.3) and right dislocation (§9.6.4), emphatic topic chaining (§9.6.5).

First, the use of the ergative marker continues to relate to the agentivity of the subject of a clause, where agentivity relates to the degree that an event is carried over or transferred from one participant to another. A number of pieces of evidence from the previous section point to this analysis. Most generally, the presence of the ergative marker is correlated with the transitivity of the clause. As was shown in §9.5.2, the absence of the ergative marker is associated with a clause which exhibits a lower degree of transitivity, according to Hopper and Thompson's (1980) transitivity continuum. For example, it is less likely to be found when the verb is marked continuous or is modified by an auxiliary which signifies that the event has not yet occurred. Both of these are markers of a lower level of transitivity. More specifically, the ergative marker has a positive correlation with the agentivity of the subject nominal, a measure of a highly transitive clause. To begin with, it is never found marking objects. This extension of the ergative marker has

occurred in Jingulu, an Australian language spoken west of Kalkaringi. In Jingulu, the ergative case suffix now marks other constituents in the clause beyond the transitive subject, and has been analysed as a general marker of discourse prominence, as a result (Pensalfini, 1999). In Gurindji Kriol, the ergative case suffix marks only subjects, albeit both transitive and intransitive subjects. In particular, the ergative suffix is more likely to mark inanimate subjects than animate subjects. As McGregor (1992; 1998) has shown, inanimate subjects are more unexpected as agents than animate subjects. Thus the use of the ergative marker with inanimate nominals ensures their interpretation as agentive entities. Similarly, the use of the ergative marker on intransitive subjects highlights the agentivity of the intransitive subject, which has a low level of agentivity in its unmarked form. The continuing association with the transitivity of the clause, particularly in relation to subject agency ensures that it can also be co-opted for the purpose of argument disambiguation, as discussed in §9.4, and in this respect I continue to use the term 'ergative' marker for this suffix.

The correlation between ergative marking and the two clausal features also points to a link between the ergative marker and information packaging. In §9.4, I showed that SVO word order was the most frequently occurring configuration in Gurindji Kriol, with 87.5% of transitive clauses patterning SVO. Greenberg (1966, p. 67) and Kroeger (2004, p. 141) claim that the most frequent word order in a language is the pragmatically unmarked pattern⁹⁵. Applied to Gurindji Kriol, SVO word order can be analysed as the pragmatically unmarked word order pattern, and deviations from this pattern as altering the information structure of a clause. Of particular interest is the effect of the right and left dislocated positions on the information structure of a clause. These positions can be characterised in terms of two clausal variables tested in the previous section: word order and the presence of a co-referential subject pronoun, which were shown to be positively correlated with the appearance of the ergative marker (§9.5.3). Dislocation involves the movement of an argument from its unmarked position to the right or left periphery of a clause, with a co-referential pronoun marking the argument in its place. Both left and right dislocation are related to discourse salience. For example, in (221) the object "the

⁹⁵ However note that this connection has not gone unchallenged, for example see Dryer (1995).

old man" is left dislocated, with a co-referential pronoun providing the object argument. The result is that the patient of the action, the victim of the boomerang, in this example, is emphasised. The significance of dislocation and the use of the ergative marker will be discussed more fully in §9.6.3 and §9.6.4.

- (221) an det *marluka* *kurrupartu-ngku* *pangkily* im.
 and the old.man boomerang-ERG hit.head 3SG.O
 "And the boomerang hit the old man on the head."
 (FHM101: TA13yr: Ergative pictures)

This pre-theoretical discussion of discourse salience resembles some accounts of focus, though it must be noted that a coherent account of discourse-related categories such as topic and focus does not emerge from the literature. Givón (1993, p. 173) suggests that the notion of focus relates to the importance of information in a verbal clause. Lambrecht (1994, p. 210) gives a more relative account of focus, describing its function as signalling a salience relation between an element of a proposition and the proposition as a whole. However other views of focus also exist. For example, Halliday (1967) suggests that focus relates to "newness", that is textually or contextually underivable information. Similarly, Comrie (1981) defines focus as "the essential piece of new information that is carried by a sentence". Here I follow Choi's (1999)^{96,97} analysis of focus and indeed topic as being constituted by the features \pm newness and \pm prominence. 'Newness' relates to the given-ness of information, and 'prominence' to the information status accorded to each discourse entity. Both of these features are relative to the discourse status of other information in the clause. Under this analysis, focus relates specifically to new information, and topic to given information, and both may occupy discourse prominent positions. Thus discourse prominence is not equivalent to focus. Discourse prominence relates to the speaker's evaluation of the status of information, and the attribution of importance to certain pieces of information.

⁹⁶ see also Butt and Holloway-King (1996) for a similar treatment of topic and focus, and Simpson (to appear) for an analysis of constituent order in Warlpiri based on Choi's work.

⁹⁷ Choi (1999) considers topic and focus to be one aspect of an integrated account of syntax, however here I follow Simpson's (to appear) analysis of information structure as being a separate module which merely interacts with the syntax.

In order to describe the function of the ergative marker in Gurindji Kriol, I follow Choi's (1999) analysis of discourse features and suggest that this marker is used to denote discourse entities that the speaker wishes to make prominent relative to another entity. The prominent discourse entity may be new or given. However, the ergative is more restricted in its scope in terms of marking discourse prominence. It cannot be used to mark any discourse entity, only subjects of transitive and intransitive clauses. Thus I suggest that it highlights the agentivity of the subject. In this respect, the pragmatic use of the focal ergative marker in Warrwa, and the ergative marker in Umpithamu, are closest to the pragmatic behaviour of the ergative in Gurindji Kriol, as will be discussed in §9.7. In Gurindji Kriol the ergative marker does not alter the agentivity of the A nominal, i.e. it does not change the level of agentivity with respect to either the semantic value of the actor or the expectation of that actor's behaviour in terms of world view or a given context. Rather, it focuses on information already present in the discourse. Discourse prominence in Gurindji Kriol cuts across the categories of topic and focus. Sometimes, in adding prominence to the agentivity of one actor, the intended interpretation may be to simultaneously highlight another actor's lack of agency, as in the contrastive constructions exemplified in §9.6.1. In other situations the discourse prominent agent adds new information to a clause, as shown in the question-answer pairs in §9.6.2. Old information may also be highlighted, as will be demonstrated in §9.6.5, in subject chaining where a repeated A nominal is clearly the topic of a sentence, but is also the discourse prominent entity. As a discourse marker of only subjects, the ergative marker does not deviate wholly from its syntactic function as a marker of the A argument. A number of situations demonstrate this function of the ergative marker: focus constructions: contrast (§9.6.1) and newness (§9.6.2); and topicalisation constructions: left (§9.6.3) and right dislocation (§9.6.4), and emphatic subject chaining (§9.6.5).

9.6.1 Contrast

The first use of the ergative marker which relates to discourse prominence is the contrast of two actors. Givón (2001, p. 262) describes contrastive focus as a device where "a referent is contrasted with another referent of roughly the same semantic class". Thus the

use of contrast foregrounds the identity of one discourse entity over another, making it more prominent. According to Givón, contrastive focus involves movement, if the constituent is normally non-initial. In the case of initial constituents, it may be marked in some other way. In English, this constituent is stressed, and in Korean, a topic marker is added to this referent. In Gurindji Kriol, two agents are contrasted by marking the discourse prominent agent with an ergative suffix. This construction is used to contrast two entities which are semantically similar, but more particularly to contrast degrees of agency between two subject nominals. The nominal, whose agency is highlighted, receives ergative marking regardless of clause transitivity. This construction differs from Gooniyandi, where both actors receive ergative marking in contrastive constructions (McGregor, 1992). An example of this type of construction is shown in (222). This sequence occurred during a discussion amongst 22-year-old women about passing on knowledge about the cattle station days and significant historical events around Kalkaringi. RS begins by saying that their parents recounted the events of this period to them. VB then repeats the semi-transitive clause, repositioning the group of women as the agent. The emphatic pronoun *ngantipa* (1st person plural inclusive) is accompanied by an ergative marker in a left dislocated construction (see §9.6.3). In doing so, VB is not merely contrasting the actors, but also their agency. She emphasises that the responsibility for the intergenerational transmission of knowledge now lies with them, as parents of the new generation. RS repeats VB assertion to add emphasis.

(222) (FM060.B: RS20yr, VB20yr: Conversation)

RS: dei *jartakap ngantipany* stori, *yurrk ngantipany* stori *nyarralu*.
 3PL.S talk 1PLINC.DAT story recount 1PLINC.DAT story 3PL
 "They (our parents) tell stories to us, recount stories, **they** do."

VB: an *ngantipa-ngku* wi tok bo *ngantipany* *karu* na.
 and 1PL.INC-ERG 1PL talk PREP 1PLINC.DAT child DIS
 "And now **it is us** who tells these stories to our children."

RS: yeah *ngantipa-ngku* *yurrk ngantipany-ku* *karu-yu* na.
 yeah 1PL.INC-ERG recount 1PLINC.DAT-DAT child-DAT DIS
 "Yeah **we** tell the stories to our children now."

This contrastive structure also often occurs in child-directed speech in Gurindji Kriol. In this context, a care-giver implies that the child is not performing to her expectations and in doing so attempts to convince a child to change his/her behaviour. The following example was uttered in the context of a woman attempting to make her 4 year old granddaughter talk. The child refuses to say anything, but another child present is talking instead. The use of the ergative here seems to emphasise the other child's activity in contrast with her granddaughter's. It is used with the intransitive verb *toktok* (talk).

(223) *ma* *yu* *garra* *toktok* *na* *yu* *garra* *toktok*
 DIS 2SG OBL talk.REDUP DIS 2SG OBL talk.REDUP

nyantu-ngku *toktok*.

3SG-ERG talk.REDUP

"Come on, you have to talk, you have to talk, see **he's** talking."

(FM005.A: JA39yr: Conversation)

9.6.2 Newness

In a reply to a question, the element that provides the informative part of the answer, the part that was previously unavailable to the hearer from the discourse context, is the focus of the clause (Comrie, 1981, p. 62; Kroeger, 2004, p. 141; Lambrecht, 1994, p. 207).

Marking a new agent ergative highlights the agent as exceptional (McGregor, 1998, p. 524). In (224), the ergative marker is found in an intransitive clause on the "who" nominal and the "I" nominal in the answer in Gurindji Kriol in a discussion about sleeping arrangements. The use of the ergative marker on "me" emphasises the speaker's contribution to camp activities.

(224) (FM36.A: SS18yr, KW4yr: Conversation)

SS: *an* **wijan-tu** *makin* *nyila-ngka?*
 CONJ **who-ERG** sleep this-LOC
 "And **who** is sleeping there?"

KW: *ngayu-ngku*.
1SG-ERG
 "I'm (sleeping there)."

Another type of question-answer pair in which the question word and the subject in the answer are always ergatively marked is the one word question/response sequence. Typically, this bare transitive subject occurs when participants share a lot of contextual knowledge, and an agent's actions have had a negative result. For instance, when children are part of the discourse context and one of them is crying, the adults present often ask simply, *wijan-tu* "who-ERG". The implication is that the child is crying because of the actions of another child, the referent of the question nominal. The context is understood by everyone involved and a verbal clause is not needed. In this situation, the question nominal is always case-marked. Similarly, the adult might then suggest someone who might have caused the child to cry, *Nangari-ngku* (SUBJECT-ERG) meaning "Did Nangari cause the child to cry?". The name in this context is always case-marked, and the presence of the ergative marker draws attention to the agent who performed a negative action.

9.6.3 Left-dislocation

In Gurindji Kriol, the ergative marker is also used in conjunction with L-dislocated constructions to accord prominence to a topical constituent. L-dislocations consist of an ergative-marked A nominal accompanied by an anaphoric pronoun in Gurindji Kriol. A separate intonation contour, which separates the dislocated nominal from the main clause, is also diagnostic of L-dislocation (see for e.g. Givón, 2001, p. 266). However prosody is not always given as a criteria for L-dislocation (see Kim, 1995, p. 276, for English; and Sankoff, 1993, p. 126 for Tok Pisin), and is not used as a criterion for Gurindji Kriol. (225) is a typical instance of a topicalisation structure. (226) is a similar example from an intransitive sentence.

- (225) *marluku-ngku* i=m *lajap* *nyanuny* *Kaku*.
old.man-ERG 3SG.S=NF carry.shoulders 3SG.DAT FF
 "The old man carries his grandchild on his shoulders."
 (FHM075: SS18yr: Ergative bingo)

- (226) an **det** *gel-tu* i=m kombek garram pulastikbag
 CONJ **DET** **girl-ERG** 3SG.S=NF return with plastic.bag
 "And **the girl** is coming back with a plastic bag."
 (FHM006: JC9yr: Locative pictures)

Functionally, Givón suggests that "L-dislocation is typically a device to mark topical referents, most commonly definite and anaphoric ones, that have been out of the focus of attention for a while and are being brought back into the discourse" (Givón, 2001, p. 265). In conversation, he notes that it may be used to take the floor and re-introduce a topical referent, and in narratives it is often used as a chain initial device (Givón, 2001, p. 266). In this respect L-dislocations entail both given-ness and discourse prominence in terms of Choi's (1999) features of discourse. In Gurindji Kriol, actors may be introduced in a number of ways in conversation and narrative. The most common means seems to be through an intransitive clause which follows observations made by Du Bois (1987). However, when new referent is abruptly (re)-introduced and the speaker wishes to emphasize the activity of an actor, the L-dislocation construction is used in conjunction with an ergative marker. For example, in (227) a group of women are standing around in long grass, worrying about snakes. VB says she is going to go where the grass has been cleared by fire. Then RS suddenly notices that FM is just about to come with the car to pick them up. She introduces FM into the discourse in an L-dislocated construction with FM marked ergative, despite being the subject of an intransitive clause.

- (227) VB: *ngayu-ma* ai=m gon *yuka-ngkirri* barn-*nginyi*.
 1SG-DIS 1SG.S=PRS go grass-ALL burn-ABL
 "Me, I'm going that way to where the grass has been burnt out."
- RS: *nyila-ma* **FM-ngku** i=m *partaj* motika-*ngka*
 that-DIS **FM-ERG** 3SG=NF climb car-LOC
 'Oh that one - **FM**, she's just getting into the car.'
- RS: i=rra kom *ngantipany*.
 3SG=FUT come 1PLINC.DAT
 'She'll come and get us.'

9.6.4 Right-dislocated A nominals

R-dislocations are the structural mirror of L-dislocations, however movement also occurs when these constructions involve a subject. The subject, which is unmarked in the pre-verbal position, is found post-verbally, and is cross-referenced with a pronoun. An example is given in (228):

- (228) **i=m** put-im jumok tebul-*ta* igin **det** *kajirri-ngku*.
3SG.S=NF put-TRN cigarette table-LOC again **the** **woman-ERG**
 "She puts the packet of cigarettes on the table, **the old woman that is.**"
 (FHM066: LS20yr: Locative pictures)

One of the functions of this construction is an afterthought or repair device. Givón summarises the use of R-dislocation as a construction that is used when the referent is firstly considered to be highly accessible but then the speaker "decided that maybe the referent was not quite as accessible, and so was better re-coded as full NP" (1987, p. 267). In this respect the nominal is given discourse prominence in order to aid the interpretation of a sentence. Indeed, in Gurindji Kriol, many of the examples of post-verbal A nominals come from narratives where one actor has already been introduced, yet the next sentence uses a pronoun which actually refers to a new actor. Potentially, the use of the pronoun to introduce a new actor could cause some confusion to the listener as it may be interpreted as the old actor. The post-verbal A nominal is added in this highly salient position to avoid confusion. The use of ergative marking is almost contrastive, in that it is shifting the agency of nominal from the assumed agent to the corrected agent. For example, in (229), the monster is introduced in the intransitive clause in (a). The following sentence begins with a third singular pronoun which appears to refer to "the monster", but in fact refers to the mother character, thereby breaking the topic chain. The post-verbal nominal both changes the referent of the pronoun, and ensures that "the mother" is not interpreted as an object. In this respect, the topic chain is repaired. Ergative marking on the post-verbal nominal emphasises the agency of "the mother", rather than "the monster". The ergative marker also helps disambiguate the arguments, by

ensuring that it is "the mother" not "the monster" that is interpreted as the subject of "get".

(229)

- (a) *kaya* bin *makin* pikit-abat
monster NF sleep forget-about
- (b) i bin jas gon ged-im *nyanuny* **mami-ngku-ma**.
 3SG.S NF just go get-TRN 3SG.DAT M-ERG-DIS

"**The monster** went to sleep and forgot (about the dog). So **his** [the dog's] **mother** went to get him." (FM017.D: SS18yr: Monster story)

9.6.5 Emphatic subject chains

The ergative can also be used in conjunction with subsequent mentions in topic chains where the topic is not reduced to an anaphoric pronoun. These types of topic chains, where full nominal topics are repeated, are commonly observed in Aboriginal narratives. However this use of ergative marking in optional ergative languages has not been examined⁹⁸. In Gurindji Kriol, the repetitive use of the ergative marker intensifies the event, and is used in unexpected and emphatic situations. The following extract is an example of this type of construction used in an unexpected situation. A group of women are sitting about talking when suddenly a cockatoo bird (nick-named *Cocky*) which is sitting on FM's shoulder starts screeching. The speaker abruptly introduces the bird using a L-dislocated construction and then jokingly describes what the bird is doing to a boy, LD. Despite the fact that the cockatoo is the topic throughout this interaction, it is referred to using a full nominal and ergative marker in every mention which gives it discourse prominence. After this event, the women go back to quiet talking. The whole event is described with heightened energy and amusement.

⁹⁸ Note that Gaby (forthcoming, p. 6 and 10) provides a couple of examples of repetitive topic chaining sequences from Kuuk Thaayorre, an Australian language spoken in north Queensland. However she does not refer explicitly to these examples as repetitive topic chaining.

(230)

(a) *koki-ngku* tu i=m ansa-im ah.
Cocky-ERG too 3sg.s=nf answer-TRN ah.

(b) LD-*tu* sweya yu koki.
 NAME-ERG swear.at 2sg Cocky

(c) koki ah.
 Cocky ah.

(d) *koki-ngku* sweya yu nogud.
Cocky-ERG swear.at 2sg no.good

(e) *nyawa* yu luk *koki-ngku* FM-*ngka*.
 this 2sg look **Cocky-ERG** NAME-LOC

(d) im=in sweya yu *jurlaka-ngku* *wartiti*.
 3sg=PST swear.at 2sg **bird-ERG** poor.thing

"Cocky, he's answering you back. Hey Leyton's swearing at you, Cocky. Cocky ah. Now Cocky is swearing at you badly. See look Cocky is sitting on FM's shoulder. He was swearing at you, that bird, poor thing."

Another example of this type of topic chaining using the ergative marker repetitively is exemplified in the following extract. It comes from a picture-prompted narrative told by SS to her brother, WB. WB's attention is elsewhere and SS attempts to draw him into the story by adding him as a character and increasing the intensity of the event within the story. He is abruptly introduced in an inclusory construction (line a) which is L-dislocated, and the event is then repeated twice using ergative marked emphatic pronouns. As a result WB is made salient in the discourse, which draws the child's attention back to the story.

(231)

- (a) *nyawa-ma najan-tu dei bin jayijayi im WB-ngku na.*
 this-DIS another-ERG 3PL.S PST chase 3SG.O NAME-ERG DIS
- (b) *nyuntu-ngku jayijayi na yu luk na.*
 2SG-ERG chase DIS 2SG look DIS
- (c) *nyuntu-ngku jayijayi jurlaka na.*
 2SG-ERG chase bird DIS.

"**This other lot** chased the bird, including **WB**.

You are chasing it, have a look. **You** are chasing the bird now."

In these types of examples, and the previous examples of contrast and topicalisation, the ergative exists in sentences where argument disambiguation does not present as a problem. All actors are pre-verbal and human, and some occur in intransitive clauses. Instead, the presence of the ergative marker seems to emphasise the agentivity of the actor. The agentivity of the actor is highlighted with the use of the ergative marker. Conversely if an ergative marker does not appear in clauses where the actor appears pre-verbally and is human, no particular prominence is accorded to this actor.

9.7 Optional ergativity in Australian languages

Optional ergativity has been widely reported in Australian languages as an *internal* feature of Australian languages, as well as a result of *language contact*. Though many of the characteristics of optional ergative marking, such as variable marking on A and O arguments are similar across these two language types, descriptions of optional ergative systems tend to be divided between these contact and non-contact varieties. Where optional ergativity is not attributed to language contact, the use of the ergative marker is generally ascribed to discourse features, though it remains primarily an argument marker. In the case of contact languages, optional ergativity is considered a symptom of language death, and a consequence of the adoption of word order as the argument marking system. Each of these optional ergative language types are discussed in this section. My approach with regard to Gurindji Kriol has been to suggest that optional ergativity is a consequence

of the encroachment of word order into the argument marking system which has, in turn, resulted in the functional extension of ergative marking into discourse prominence.

Optional ergativity has been most commonly observed as a feature *internal* to the systems of some Australian languages, for example in Pama-Nyungan languages: Baagandji (Hercus, 1976) and Kuuk Thaayorre (Gaby, forthcoming), and in non-Pama-Nyungan language: Gooniyandi (McGregor, 1992; 1998), Jaminjung (Schultze-Berndt, 2000; 2006b), Murrinh-patha (Walsh, 1976), Umpithamu (Verstraete, 2005), Wagiman (Cook, 1988) and Warrwa (McGregor, 2006a). Many accounts of optional ergativity in these languages suggest that this case marker encodes more than syntactic relations. Discourse variables are generally considered to play a role in conditioning ergative marking in several optional ergative Australian languages. The most thorough pragmatic account is McGregor's (1992; 1998; 2006a) work on discourse level expectedness and the agentivity of an actor in Gooniyandi and Warrwa. McGregor defines "expectedness" in terms of how predictable an actor is within a narrative episode, and animacy as a semantic value of the actor. Actors, which are both expected and which have an expected level of agentivity, are generally elided. A full nominal occurs when the actor is unexpected. In Gooniyandi, the presence of ergative marking on the full nominal signals normal or higher than expected agentivity, with the absence of marking signifying an actor low in agentivity (McGregor, 1998, p. 518).

The use of ergative marking in other optional ergative Australian languages is considered marked in terms of McGregor's notions of expectedness and agentivity. In Warrwa (McGregor, 2006a), Kuuk Thaayorre (Gaby, forthcoming) and Jaminjung (Schultze-Berndt, 2006b), the presence of an ergative marker in transitive clauses is unmarked discursively, while the absence of an ergative marker signals an unusual degree of agentivity. In Warrwa, the use of a specific focal ergative marker signals higher agentivity and unexpectedness, and the non-use of either the focal or general ergative marker defocuses the agent (McGregor, 2006a). Verstraete (2005) makes quite different claims about Umpithamu. Expectedness and agentivity do not play a role in the optional use of the ergative marker, rather clause-level information is considered important here.

The unmarked situation is for the agent nominal not to be marked by the ergative. The use of the marker carries more pragmatic weight, assigning strong focus to the agent and emphasising the agentiveness of the agent.

Although optional ergativity is described as an internal feature of these languages, it is not clear whether language contact may have played a role in the development of these systems. Except for Murrinth-patha and Kuuk Thaayorre, these languages have very few speakers left, and are under heavy functional pressure from Kriol and English. For example they are no longer the main everyday language of the speakers, and are not being transmitted to children. Thus it seems unlikely that these languages have remained unaffected by language contact. Optional ergativity, as a result of language contact, is not considered in these accounts, however.

The variable use of the ergative marker has also been attributed to *language contact*, specifically, the adoption of the English/Kriol SVO word order system of indicating arguments, and the decreasing dominance of an argument marking system involving case-marking. For example, Schmidt (1985a), in her examination of language death in Dyirbal, describes optional ergativity in terms of the incremental replacement of the case marking system. In Dyirbal, the loss of the case marking system corresponds to a gradual increase in the use of English word order and prepositions. In this in-between stage of language loss, ergative marking has become optional. Her predicted end point is the complete replacement of the Dyirbal system of argument marking with the English word order system.

A similar situation has been described for Yuendumu Warlpiri (Bavin & Shopen, 1985). Bavin and Shopen conducted comprehension and production tests for Warlpiri speakers in Yuendumu. In the comprehension tasks, they found that, in school-aged children, the errors in the use of the ergative marker occurred most commonly when the object preceded an A argument. The same children also produced transitive subjects preceding objects more often than OA patterns, and did not always use the ergative marker where it would be expected (Bavin & Shopen, 1985, p. 86-88). Bavin and Shopen suggest that

these children sometimes relied on word order to signal grammatical relations, making ergative marking redundant.

In a more dramatic result of contact between Warlpiri and Kriol/Aboriginal English, an interaction between ergative marking and word order has been observed in Light Warlpiri (O'Shannessy, 2005). The predominant word order in Light Warlpiri is SVO, and ergative marking is more likely to be found where the A nominal appears post-verbally. The ergative marker has also adopted discourse functions relating to discourse prominence similar to that which I have described for Gurindji Kriol (Meakins & O'Shannessy, forthcoming).

The adoption of SVO word order seems to be common in situations of contact between Australian languages and English/Kriol, and seems to precipitate a change in a pre-existing argument marking system. However, where this phenomenon has been observed, the nature of the interaction between the two systems is not well-documented, Light Warlpiri being the exception. For example, in young people's Dyrbal, it is not clear whether SVO word order is the only pattern available to speakers, and following from this, whether ergative marking is affected if SVO order is not adopted. It is also assumed that optional ergativity is representative of the remnants of an argument marking system, and the potential transformation of the function of the ergative marker is not investigated further. In the previous sections, I have proposed an integrated account of optional ergative marking in Gurindji Kriol. I argued that competition between the Gurindji and Kriol argument marking systems resulted in the dominance of word order and the shift of the primary function of the ergative marker to marking discourse prominence.

9.8 Conclusion

In conclusion, this chapter has shown that, though the Gurindji ergative marker has been adopted into Gurindji Kriol, its function does not closely reflect that in Gurindji. This change in the function of the ergative marker demonstrates the final result of contact and competition between functionally equivalent Gurindji and Kriol structures. A number of factors motivate the appearance of the ergative marker such as the transitivity of the clause, including A animacy; and clausal features such as word order and the presence of a co-referential pronoun. The dominant use of word order for argument marking has made this case suffix's primary function redundant, however its use now extends into the domain of discourse.

Finally, the fact that the ergative marker did not disappear, but rather has been reanalysed as a discourse marker is interesting given that functional competition often results in the loss of a form from one language (see for example the Kriol possessive construction in §6.4). An explanation for this shift of the ergative case suffix from an argument marker is given by Meakins and O'Shannessy (forthcoming). In Gurindji, first position is marked as a discourse prominent position. Constituents in this position are discursively salient. The adoption of SVO word order in Gurindji Kriol had related effects both on the ergative marker and the function of clause initial position, since subjects are often assumed to have some discourse prominence anyway. As I have described in §9.4, much of the functional load of argument marking was shifted from the ergative marker to first position with the result that this position was rendered unmarked in terms of discourse. The clause initial position became a syntactic slot rather than a prominence position. In this transitional stage of language change, a hole in information structure encoding existed and the ergative marker had a lighter syntactic load. These conditions have allowed the reanalysis of ergative marking. Essentially the ergative marker did not disappear, rather it began filling the 'hole' left when first position took on a partial syntactic function.

10. CONCLUSION: CONTACT AND COMPETITION BETWEEN GURINDJI CASE MARKING AND KRIOL FUNCTIONAL EQUIVALENTS

10.1 Introduction

The aim of this thesis has been three-fold. First, I provided the first basic socio-historical (§2) and grammatical description of Gurindji Kriol (§A1). The main body of the thesis then consisted of two sections which (i) gave an account of the development of Gurindji-derived case morphology in Gurindji Kriol from its code-switching origins (§3-§5) and (ii) described the function of four case markers as they operate in particular domains of the mixed language today (§6-§9). I have focussed on case morphology because it is here that the degree of syntactic intertwining exhibited by Gurindji Kriol most clearly emerges. In §3, I observed that the presence of inflectional morphology from two interacting languages is rare in situations of code-switching and borrowing, with the dominant language contributing the bulk of grammatical structure to the bilingual mix. Nonetheless, I demonstrated that a number of mixed languages contain inflectional morphology from both source languages, for example Michif, Mednyj Aleut and Light Warlpiri. This degree of inflectional co-contribution suggests that neither source language dominates in the resultant mix. Gurindji Kriol can be included in this category

of mixed languages, with Kriol marking verbal inflectional categories and Gurindji contributing case morphology to the nominal structure. In §4-§5, I showed that the presence of Gurindji-derived case markers can be traced back to their origins in Gurindji-Kriol code-switching in the 1970s. I proposed a pathway by which case-marked arguments were integrated into the Gurindji Kriol matrix clause via adjunct structures in alternational code-switching. The integration of other case-marked nominals, such as locative and allative-marked nominal adjuncts, into the mixed language through alternational code-switching was also described. However, as I showed in §6-§9, these Gurindji-derived case markers were not absorbed into Gurindji Kriol unscathed. Changes in their form and function occurred during this process of integration, such that the case markers present in Gurindji Kriol are not carbon copies of their Gurindji sources.

A final question remains with regard to the development and function of case morphology in Gurindji Kriol - why didn't these case markers transfer or replicate in an unaltered form from Gurindji into the mixed language? Indeed the previous four chapters demonstrated a number of differences between case marking in Gurindji and Gurindji Kriol, including changes in the functional distribution of dative marking (§6), double-marked locative forms (§7), convergence in goal marking (§8), and a functional shift in the use of the ergative marker (§9). Related to the question of how these changes came about is the question of why so much variation is present in Gurindji Kriol, and moreover why it is often the case that more variants are available for marking specific functions in the mixed language than are provided by the source languages, Gurindji and Kriol. In this final chapter, I argue that linguistic innovation occurred in the formation of Gurindji Kriol as the result of contact and competition between the source languages in marking particular functions, such as topological relations or argument roles. I draw together the diachronic (§4-§5) and synchronic (§6-§9) accounts of case marking in Gurindji Kriol with discussion of the mechanisms of contact which mediated between the code-switching and mixed language, and continue to operate in Gurindji Kriol today.

Throughout this process of contact and competition, a number of factors played vital roles. To begin with, code-switching was an important ingredient, providing the dynamic contact environment necessary for interaction to occur between Gurindji and Kriol. This form of language mixing aided a process which began with the recognition of functional equivalence between elements and the structural ability to switch between these elements. The identification of the correspondences between different forms created a friction between these variants as they competed for dominance in the newly emerging mixed language frame. This process, which played a role in the creation of the mixed language, continues to shape the language today. §10.2 outlines this argument.

A number of outcomes are the result of this contact and competition between equivalent functional elements from Gurindji and Kriol, as was shown in §6-§9. In §10.3, I summarise the range of contact outcomes described for the four Gurindji case markers and their Kriol equivalents: dative, locative, allative and ergative - within the context of specific constructions: possessive constructions, topological relations, goal constructions and argument marking, respectively. In some cases, the Gurindji or Kriol form was transferred virtually intact from the source language into Gurindji Kriol, and operates in much the same way in the mixed language as it does in the source language. However, generally speaking, the resultant form is an amalgam of both languages, where components of the form and function of the corresponding Gurindji and Kriol elements converge to create a unique form.

Variation is a key factor which helped drive the changes described, and is also a result of this process of contact and competition. It was important for the formation of Gurindji Kriol, and continues to contribute to ongoing change in case-markers in this mixed language. I suggest that the presence of a number of variants, which mark the same function, is an important factor in the innovation of case-marking. At any one point in the evolution of the language, a number of language forms co-exist, with variants dominating and interacting with each other to differing extents. These variants in Gurindji Kriol continue to compete for dominance, with Kriol, in particular, increasingly wielding its

influence in the speech of younger generations. The contribution of variation to the origin and evolution of case markers in Gurindji Kriol is discussed in §10.4.

10.2 Functional and structural equivalence in language competition

In §4 and §5, the features of Gurindji-Kriol code-switching which preceded the formation of the mixed language were discussed. The mixed clause was characterised as a predominantly Kriol matrix clause (§4.3.1), with Gurindji insertions depending on the degree of typological match between switching elements (§4.4.2). Also common were Gurindji alternational structures, i.e. switched elements found peripheral to the core structure of the matrix clause (§5.2.1). Competition and contact began in this environment with the identification of functional equivalence between competing forms - forms from Gurindji and Kriol which mark the same function in their respective languages. Also crucial for competition was a lack of structural constraints, which would impede the replacement of one form with another. Structural compatibility between forms was essential for competition between variants to occur. These components of contact and competition - code-switching, and the recognition of function and structural equivalence - are discussed below.

In order to initiate competition between the languages, forms from the two languages need to be considered *functionally equivalent*, that is they must be recognised as marking the same function. In some cases, one or other of the interacting languages may not mark a particular function, and as a consequence, competition will not occur. For example, like many Australian languages, Gurindji does not mark connections between clauses and nominals with coordinating conjunctions such as "and". On the other hand, Kriol contains the form *an* (<and), and Gurindji Kriol has adopted this conjunction. In this situation no competition has occurred, because Gurindji does not contain a functional equivalent. Rather the Kriol form has filled a 'gap'. Indeed *an* has been borrowed into many Australian languages which have had prolonged exposure to English or Kriol. The opposite outcome may also occur, where a form is lost despite a lack of competition. For instance, Gurindji contains two complex sets of inflected directionals which express

cardinal points and river drainage (see §A1.11). Kriol has no equivalent system, though east and west are expressed by the terms *sanguap* (<sun-go-up) and *sangudan* (san-go-down). Rather than being directly adopted into the Gurindji Kriol frame this system has been lost (though it continues to be used in some domains).

In general, however, Gurindji and Kriol have many forms which correspond with each other. Functions may be marked by forms which may be morphologically very different. As I showed in §6-§8, the corresponding forms which mark possessive constructions, topological relations and goals are a Gurindji bound postposition and a Kriol free form preposition. Functions may also be marked through syntax rather than morphology. For example, though Gurindji uses the ergative case suffix to mark transitive subjects, Kriol uses word order, specifically first position in the core SVO structure. These different types of marking also came into competition in the making of the Gurindji Kriol syntactic frame, as was discussed in §9.

The second aspect of competition is the degree of *structural equivalence* between forms which are recognised as being functionally equivalent. In the previous chapters (§4.4.2 and §5.5), I described structural equivalence and competition between Gurindji and Kriol forms in terms of switching and Sebba's (1998) notion of Categorical Congruence. Categorical Congruence contributes to the shape of code-switching by blocking or allowing forms to enter into the mix. It is useful to think of the code-switching, and indeed the potential mixed language structure, as a series of slots where forms from Gurindji and Kriol are either permitted or restricted depending on their structural compatibility with each other. As was shown in §4.3.1, prior to the emergence of the mixed language, Kriol provided the matrix language for code-switching between Gurindji and Kriol. Gurindji elements could be inserted into the Kriol frame depending on their degree of structural match with Kriol counterparts. This degree of congruence played a vital role in the outcome of competition between functionally equivalent elements. For example, it was shown in §4.3.2 that, in the code-switching, Gurindji pronominal clitics were blocked from occurring in a Kriol matrix structure. These bound pronouns and equivalent Kriol free pronouns were regarded as incongruent by speakers. As a result,

pronominal clitics disappeared completely in the emergence of the mixed language. The outcome of this situation is that no variation occurs between these elements, with Kriol pronouns always found in the mixed language.

Different results are found where forms were considered congruent. For example, though Gurindji case-marked transitive subjects and indirect objects were initially restricted from occurring in the core matrix clause, in a later stage of language mixing they were integrated into the clause. The process of integration was driven by speakers' change in their perception of congruence. In this respect, I follow Sebba (1998) in regarding congruence as a relative concept where perceived incongruence may change over time (§4.4.2). The process of integration created competing Gurindji and Kriol forms. For example, as was discussed in §9, at some point in mixed language genesis, the Gurindji ergative case suffix and the Kriol first position were regarded as equivalent, with the result that the forms competed to mark argument relations. Word order dominated, with the ergative marker undergoing a functional shift as a consequence of this process. A different result occurred as an outcome of competition between Gurindji and Kriol dative forms in possessive constructions, where the Gurindji form prevailed, albeit with some distributional changes in marking inalienability (§6). The role of competition and variation in these functional domains is discussed further in §10.3.

Variation in the outcome of competition between equivalent forms also resulted from the switching of elements not predicated in the matrix clause. The concept of constraints is not relevant here, only applying to code-switching where the matrix language imposes structural constraints such as categorial congruence on potential switching. In this respect, the matrix language does not control the other language in the mix. Thus the recognition of functional equivalence between forms from the languages is enough for competition to ensue. The result is also variation in the mixed language, similar to that discussed for forms which are found to be structurally congruent. The marking of topological relations and goals can be framed in terms of competition and variation, as shown in §10.3. In these cases, the forms which mark these functions are local rather than structural cases. In this respect, they do not participate to the same extent in the argument

structure, marking complements and adjuncts (for a discussion of these terms see §A1.15.2). They were a part of alternational structures in the code-switching which preceded the formation of the mixed language, and show similar variation in the results of competition as those forms found in possessive constructions and the argument structure of the clause.

Thus the variants found in the mixed language are the result of competition between forms which is facilitated by the preceding code-switching stage, and the imposition of structural constraints by the matrix language. Where structures are not perceived to be congruent, one language dominates and the other language is marginalised. Because Kriol is the prevailing matrix language in the code-switching, it is the only language which completely dominates in some of the mixed language structures. In these cases, the form and function of Kriol core clausal elements are transferred relatively intact into the mixed language. For instance, there is almost no variability in the verb and pronoun structures of Gurindji Kriol, and they do not differ significantly from Kriol⁹⁹. On the other hand, where structures are considered typologically congruent, or where congruence does not affect the permissibility of structures, as is the case with alternational structures, friction between the languages occurs. Congruence between the languages creates these points of friction. In the formation of Gurindji Kriol, initially there was no friction between case-marked arguments and Kriol equivalents due to a typological incongruence between the structures. However, as the case-marked arguments were integrated into the composite clause structure of Gurindji Kriol, they came into competition with their Kriol counterparts. Throughout all of this process variation underlies the competition. Competition cannot occur without at least two variants to compete, and the end result is also most often variation. The role of variation is discussed in §10.4.

⁹⁹ Though it must be noted that the coverb-inflecting verb structure of Gurindji is present in Gurindji Kriol to a large extent, with Kriol basic verbs and auxiliaries taking the role of the Gurindji inflecting verbs. A characterisation of the Gurindji Kriol verb system is a topic for future research.

Theories of language competition and change are found in both historical linguistics and contact linguistics. In general, the enterprise of these two strands of linguistics differs in focus, with historical linguistics directing most of its attention to system internal change, and contact linguistics concentrating on language change brought about by external influences from other languages¹⁰⁰. For example, the comparative method is used to reconstruct the origins of non-contact languages, and theories such as Grammaticalization Theory (Heine, Claudi, & Hünemeyer, 1991; Hopper & Traugott, 1993) provide some explanations for language change. A separate range of theories exist as explanations for the formation of contact languages, for example, creole languages have been variably claimed to be the result of a Language Bioprogram (Bickerton, 1981), Relexification (Lefebvre, 1998), or a Founder Principle (Mufwene, 1996). More recently the division between non-contact and contact languages has been challenged, and a more general language ecology approach has begun to emerge which brings these two language types together under a uniform set of language change principles (Mufwene, 2001). Within historical linguistics, a similar attempt at a single coherent theory of language change which subsumes language internal and external pressures has emerged in the form of a language evolution approach (Croft, 2000). Finally, Labov (1994) also draws together historical and contact linguistics to produce a uniform theory of language change within a variationist approach. In all of these theories, competition and variation play a role in both internal and external language change. As was demonstrated in this section, newly emerged languages such as Gurindji Kriol demonstrate these processes in a readily observable manner.

¹⁰⁰ One of the results of this division in the study of language change has been a perceived division between non-contact languages which trace their ancestry back through a language family tree, and contact languages which do not find their heritage in a single genetic line (Thomason & Kaufman, 1988, p. 200 onwards). As a consequence of this division, the origins of these two language types have generally been given different theoretical treatments.

10.3 Outcomes of language contact and competition in Gurindji Kriol

The competition between Gurindji case marking and equivalent Kriol forms and systems such as prepositions and word order has had a number of outcomes in Gurindji Kriol. The most general outcome has been variation in the forms which can be used to mark particular functions, which will be discussed in §10.4. More specifically, competition between equivalent forms has resulted in the dominance of one variant over others. Continuing competition has also resulted in the emergence of new forms, and changes in form-function mappings. These processes are present in the Gurindji Kriol data, as was discussed in §6-§9. In all cases, the Gurindji case-marker is the dominant form used to mark a particular function in Gurindji Kriol. However, as has been shown, often this form does not function as it would in Gurindji, and new forms can be seen emerging in the data, which show a greater influence from Kriol. The outcome of contact in most instances is the presence of genetic material from both languages within any one construction. The different resultant forms, which were discussed in the previous chapters, are summarised here and framed within this process of contact and competition.

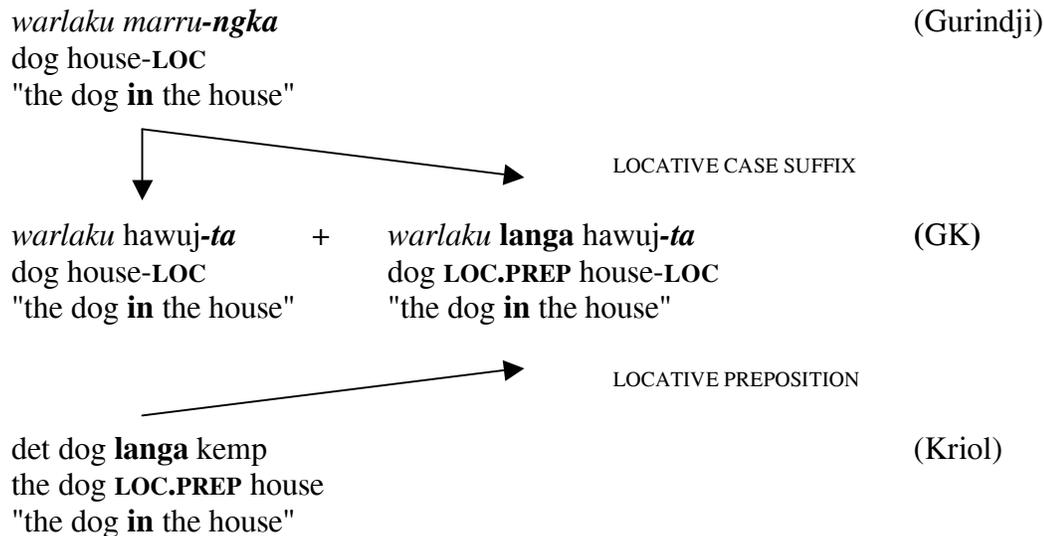
Possessive constructions in Gurindji Kriol show the first outcome of competition between Gurindji and Kriol functional equivalents (§6). Here the Gurindji system of marking almost completely dominates possessive constructions, however a change in the distribution of Gurindji marking also results. Gurindji distinguishes two classes of nominals in possessive constructions. Alienable nominals are related to their possessor through the dative case suffix, and inalienable relationships are indicated through simple juxtaposition. Similarly in Kriol alienable and inalienable nominals are differentiated by dative marking, in this case the use or non-use of a dative preposition, respectively. In Gurindji Kriol, the Kriol dative preposition is not used in possessive constructions, with the Gurindji dative case marker dominating. However the distinction between alienable and inalienable nominals is altered. As in Gurindji and Kriol, the possessor of an alienable nominal is always found dative marked, however the relationship between the possessor and an inalienable nominal is indicated either by the dative case suffix or juxtaposition, which contrasts with the distribution of marking found in both Gurindji and

Kriol, in that juxtaposition is the construction used in both source languages. This process of change is sketched in (232). The resultant variable marking may represent a new system of distinguishing in/alienable nominals, or it may be indicative of the disappearance of the in/alienable distinction.

(232)	ALIENABLE POSSESSION	INALIENABLE POSSESSION	
	<i>ngumpin-ku kurrurij</i> man-DAT car "the man's car"	<i>ngumpin mila</i> man eye "the man's eye"	(Gurindji)
		DATIVE CASE SUFFIX JUXTAPOSITION	
	<i>ngumpin-ku motika</i> man-DAT car "the man's car"	<i>ngumpin-ku mila + ngumpin mila</i> man-DAT eye + man eye "the man's eye"	(GK)
		JUXTAPOSITION	
	<i>motika bo det man</i> car DAT.PREP the man "the man's car"	<i>det man ai</i> the man eye "the man's eye"	(Kriol)

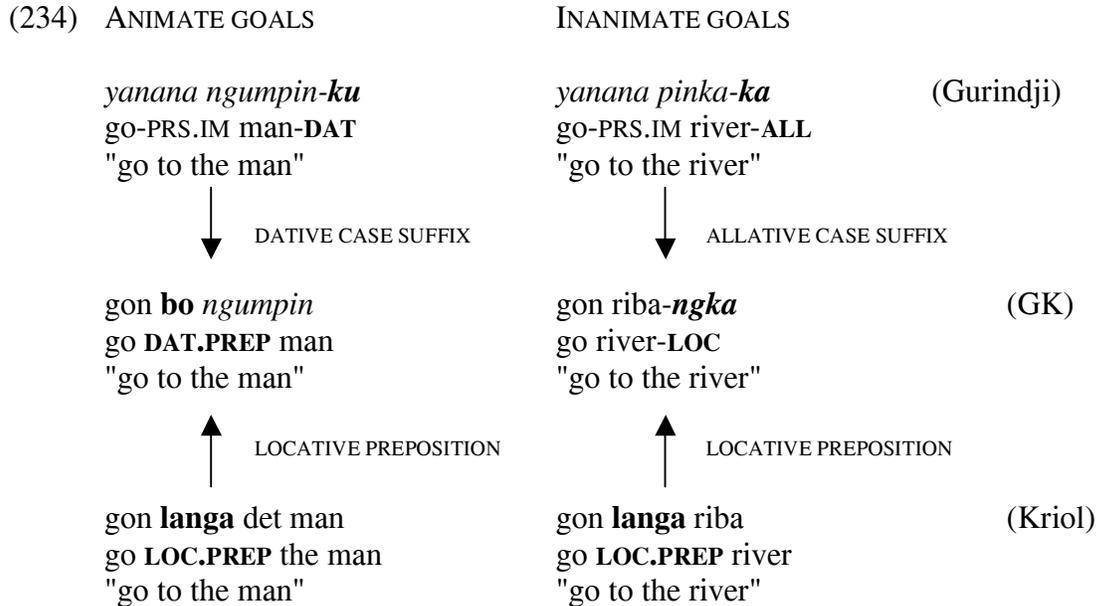
The outcome of competition between equivalent Gurindji and Kriol systems of marking *topological relations* was shown to be the mirror opposite of possessive constructions in §7. Here a new form is emerging to mark the same function as the source languages. Gurindji uses the locative case suffix to indicate a topological relationship between two entities. In Kriol, a locative preposition marks this function. In Gurindji Kriol, the Gurindji-derived locative marker is the prevailing form. However the Kriol form finds currency with younger speakers who use it in conjunction with the Gurindji form to double-mark locations, as is shown in (233). This age-related construction may have different interpretations. A synchronic analysis is simply that forms of locative marking are affected by age, with younger speakers using double-marking as a marker of identity which differentiates them from older speakers. However the presence of this construction may also represent a change in progress and the increasing dominance of Kriol in the nominal domain. Indeed the use of the Kriol locative preposition is found in conjunction with other Kriol features of the nominal system, such as determiners.

(233) LOCATIVE MARKING



A third result of competition between Gurindji and Kriol forms of marking can be demonstrated in the domain of *goal constructions*. Here forms, which are the product of convergence between Gurindji and Kriol, have emerged for marking animate and inanimate goals. Gurindji and Kriol forms have undergone functional re-mapping under the influence of the other language. In Gurindji, one of the possibilities for marking animate goals is the dative case suffix, and in the case of inanimate goals, the main marker used is the allative case suffix. Kriol does not distinguish between animate and inanimate goals in terms of marking. The locative preposition *langa* is used to mark both forms. In Gurindji Kriol, younger speakers use new forms to mark animate and inanimate goals. Animate goals are marked by the Kriol-derived dative preposition, *bo*, which is not used in Kriol for this function. This Gurindji Kriol form of goal marking represents convergence between the Gurindji and Kriol markers. The dative feature of the form is derived from Gurindji, and the phonological form itself comes from Kriol. A similar form-function remapping has occurred with inanimate goals. The Gurindji-derived locative case-suffix is used to mark inanimate goals in Gurindji Kriol, where this form cannot be used in Gurindji for this purpose. This emergent form is the result of the influence of Kriol, which does not distinguish between location and goal marking. This distribution has been adopted in Gurindji Kriol, however the Gurindji locative form

rather than the Kriol preposition is used to mark both functions. These processes are shown schematically in (234).



The final result of competition between Gurindji and Kriol functional equivalents is the change in function of a form. This result is demonstrated in the realm of *argument marking*, and involves competition between the Gurindji ergative marker and Kriol SVO word order (§9). The interplay between these systems results in optional ergative marking, and the use of word order as the main means of distinguishing between arguments, leaving the ergative marker obligatory only in situations of essential disambiguation, as shown in (235). The continuing presence of ergative marking in (i) transitive clauses where word order is sufficient for argument identification and in (ii) intransitive clauses where disambiguation is not necessary suggests that other variables motivate its optionality, namely a pragmatic cluster of factors related to discourse encoding and prominence. I showed in §9.6 that the ergative marker is now used to highlight the agentivity of a subject.

(235) ARGUMENT MARKING

<i>ngumpin</i>	<i>paya-rni</i>	<i>katurl</i>	<i>warlaku-lu.</i>	(Gurindji)
man	bite-PST.PER	bite	dog-ERG	
"The dog bit the man."				
↓				
ERGATIVE CASE SUFFIX				
<i>warlaku(-ngku)</i>	<i>bin</i>	<i>katurl</i>	det man.	(GK)
dog-ERG	NF	bite	the man	
"The dog bit the man."				
↑				
SVO WORD ORDER				
det dog	<i>bin</i>	<i>bait-im</i>	det man.	(Kriol)
the dog	PST	bite-TRN	the man	
"The dog bit the man."				

These four outcomes, which are a consequence of contact and competition between Gurindji case-markers and Kriol functional equivalents, demonstrate a range of results - the adoption of form and function with little change (possessive constructions), double-marking (topological relations), convergence (goal marking), and functional shift (argument relations and discourse prominence). These results represent just a few of the possibilities which may occur when the grammars of two languages undergo intense contact and fusion. Thus, while it is true to say that Gurindji Kriol exhibits a split in the NP and VP structure, it is clear that both languages have an effect across the entire structure of this mixed language.

10.4 Language variation in Gurindji Kriol

The more general result of contact and competition in Gurindji Kriol is variation. Variation in the language systems of mixed languages is seldom discussed. However it is clear that it has played an important role in the formation of Gurindji Kriol, and continues to affect the evolution of this mixed language even now. Variation is, at once, one of the key ingredients of language change and one of the results of this change, and in this respect it is indicative of perpetual change. There are a number of sources of this variation including continuing input from the source languages, as well as internal

variation from shared forms which are specific to Gurindji Kriol and other idiolectal varieties. As was shown in §6-§9, this variation is part of an autonomous language system, which can be mapped using variationalist methodology. This section will consider the more general role and sources of language variation in relation to Gurindji Kriol.

It is rare to find descriptions of language variation in the mixed language literature. Some accounts of variation within the grammar-lexicon mixes are given, especially those which function as secret languages. For example Matras and Bakker (2003) describe the lexical insertion of Romani elements into another language's grammatical frame in Para-Romani varieties as a matter of lexical gradation:

Although quoted samples of Para-Romani varieties often show a maximum number of Romani-derived lexical insertions into a grammatical sentence framework based on the respective majority language, there is no actual documentation of spontaneous stretches of speech in a Romani mixed variety. Rather, Para-Romani today is best described as a style of speech, consisting of occasional lexical insertions into utterances in the majority of dominant (non-Romani language). (Matras & Bakker, 2003, p. 7-8)

Similarly, Mous (2003b, p. 10) suggests that Ma'á, a language built on a Mbugu (Bantu) grammatical frame with Cushitic lexical insertions, differs only in lexical degree from Mbugu. He proposes that Ma'á is the product of parallel lexicon building, where the special Ma'á vocabulary shares the same formal morphological and semantic properties as Mbugu equivalents. Thus "one can speak Inner Mbugu by degree, i.e. the amount of parallel lexicon that one uses or that one is able to use varies from individual to individual" (Mous, 2003b, p. 7, where Inner Mbugu=Ma'á).

Variation in the grammar of a mixed language has also been reported. For example Bakker (1997, p. 159) admits that in Michif, though many speakers have no knowledge of the source languages, French or Cree, knowledge of these languages creates some variation among speakers. Specifically, he observes that speakers who know French tend to use more French elements, particularly function words. Bakker (1997, p. 160) also

observes that speakers vary in their use of French or Cree elements in Michif depending on their interlocutor.

Despite these accounts, which point to internal differences within mixed languages, reports of variation are generally not present or are played down in descriptive accounts. This lack of description probably partly relates to the youth of the field, with much energy currently devoted to general language description, defining this contact variety and postulating mechanisms of origins. However, there are also a couple of reasons why variation may be considered awkward for the characterisation of mixed languages as autonomous language systems. First, linguists approach the description of a mixed language in much the same manner as grammar writing in so-called 'normal' languages. Linguistic systems are presented as relatively uniform and, though dialectal difference is allowed, variation within a speaker community is often assumed to undermine the notion of a shared system of communication. Variation is particularly problematic in identifying a language as a mixed language because it may be viewed as a sign of linguistic instability and perhaps another contact variety such as code-switching, rather than a cohesive language system. However, it is likely that most mixed languages exhibit much variation, and no doubt more so than so-called 'normal' languages. The reason for the high level of variation is two-fold. First most mixed languages are spoken alongside at least one of their source languages (see §2.6.3), and in this respect the grammar and lexicons of mixed languages are constantly in contact with their source languages. The second source of variation is language internal. It occurs between forms which themselves resulted from the competition between forms in the source languages, as was described above. However, as I will demonstrate, the existence of variation does not undermine the identification and description of a mixed language. Though there may be some continuing interplay both within the mixed language and between this language and one or more of its source languages, the mixed language may maintain its status as an autonomous language.

To begin with, variation played an important role in the development of Gurindji Kriol during the code-switching stage. Indeed competition between the languages could only occur with the availability of different forms. At these points, either source language could potentially contribute a structure which expressed the function required. A number of levels of choice and variation existed during this period of formation. Variation was present in the source languages themselves, as well as between languages. For example, allative marking of place name goals in Gurindji is only optional, alternating with no marking (§8.3.1). Thus in many cases, this variation meant that two or more forms, one or more each from Gurindji and Kriol, were available to the emergent mixed language structure.

Variation also continues to play a role in shaping Gurindji Kriol. This is particularly striking across age groups, where Kriol seems to be more dominant in the Gurindji Kriol of younger speakers. In some cases, there are more variants available for marking a construction than during the original language mixing phase of the language. For example, as was seen in §7, Gurindji Kriol speakers now have three means of marking topological relations (the Gurindji-derived locative marker, the Kriol-derived preposition *langa* and a double-marked form) - where only two variants were available from the source languages (the locative case suffix and *langa* preposition). In other cases, variation has narrowed. For example, though both Gurindji and Kriol contain nominalising suffixes, *-ny*, and *-wan* respectively (§A1.7.1.2.10), the Gurindji form is no longer found in Gurindji Kriol¹⁰¹. Thus the range of variants has reduced to one form. In general, a larger range of variants creates new dynamics in the evolution of this mixed language.

The source of variants found in the Gurindji-Kriol mix differs depending on the point in the development of Gurindji Kriol. At the initial stage of language mixing, the only variants available were functional equivalents derived from the source languages.

Currently variants are found both internal and external to the language system. *External* variants are the result of the symbiotic nature of Gurindji Kriol (§2.6.3), in that it

¹⁰¹ In actual fact, the Gurindji form is found on the adverbial demonstrative *kuya* (like that), to form a demonstrative *kuyany* (that one). However this may be considered a fossilised form and the derivational suffix *-ny* no longer productive. See §A1.7.1.2.10 for more detail.

continues to be spoken alongside its source languages. Gurindji Kriol speakers continue to have access to structures from the source languages, though they may not speak the languages themselves. For instance, though younger Gurindji Kriol speakers do not actively use Gurindji themselves, they report having little difficulty understanding the speech of their elders (§2.2.1). In this respect, they still have access to Gurindji structures, and these may continue to affect the structures used in Gurindji Kriol. Younger speakers also have an active command of Kriol (§2.2.4), and, as I demonstrated in §7 and §8, some nominal structures of younger speakers of Gurindji Kriol show more influence from Kriol than do those from older speakers. Thus the source languages still wield some external influence on the structure of Gurindji Kriol today.

The other source of competition is language *internal*. Gurindji Kriol contains variation in terms of the choice of structures which may be used to mark a particular function. The variation itself is a result of the contact between the source languages, but in most cases the resultant forms continue to vie for dominance. Within the variation there are often a number of forms which compete, including the original forms from the source languages, and the convergent or double-marked structures which resulted from the initial competition between the source languages. For example, as was described in the case of animate goals (§8.4.2.2), the dative preposition is the most commonly-found structure. However the Gurindji dative suffix continues to be used. These two variant structures are viewed as equivalent functional forms by Gurindji Kriol speakers and compete to mark animate goals.

Though much of the internal variation found in Gurindji Kriol is shared across the language community, idiolectal variation also exists. This type of variation often involves unique forms which have the potential to spread beyond individual speakers. For example, one of the speakers in the 16-25 year old group, AR, marks instruments in a way that is unique to her own language system. All Gurindji Kriol speakers I recorded used a Gurindji-derived proprietive suffix *-yawung/-jawung* or, more rarely the Kriol *garram* preposition (§A1.7.1.2.6). AR uses both a proprietive suffix and an ergative marker, as shown in (236). This form of marking is reminiscent of Gurindji, which uses

the proprietive marker variably with the ergative marker, however the allomorph of the ergative is *-kulu* in these constructions. AR uses the allomorph *-tu*. No other speaker whom I recorded used this form of marking, which does not mean this form may not be used by other speakers, however, interestingly, her son (BS), mother (CR) and sister (RR) also never used this form.

- (236) *paka-yawung-tu* i bin *turrp* im.
prickle-PROP-ERG 3SG.S NF poke 3SG.O
 "(The nurse) injected her **with a needle**." (FHM104: AR19yr: Ergative pictures)

Idiolectal variation also exists with regard to the association of a form with other features of a clause. For example, as was shown in §9, the ergative marker is affected by the animacy of the nominal stem. Inanimate agents are more likely to receive ergative marking, though this association is not categorical across the Gurindji Kriol speaker community. In the case of one speaker from the 16-25 year old age group, RS, this association is categorical. RS always marks inanimate agents as ergative in my data set. Thus individual variation also exists at the level of the distribution of forms. Here I merely present a couple of examples of variation at the idiolectal level. It is not within the scope of this dissertation to discuss idiolectal variation in detail, though it is acknowledged as an important contributor to the continuing change found in the mixed language.

The presence of variation does not undermine the notion of an autonomous language system. In Gurindji Kriol, though one form generally dominates, the variation in forms is not random, but is meaningfully distributed. Variation has long been recognised as a normal part of language systems. Indeed the program of variationists from Labov (1972) onwards has been to challenge the assumption of linguistic uniformity which is a characteristic of formal grammatical theory, and to demonstrate that variation within a language system is not necessarily, and indeed very rarely, random. I have followed the assumption that the use of particular variants in language can be predicted by the presence or absence of other linguistic and sociolinguistic factors. This theoretical underpinning is based on Weinreich, Labov and Herzog's (1968, p. 100) notion of

"ordered heterogeneity". Labov (1969) claims that speakers make choices when they use language and these choices are systematic and can be predicted through statistical modelling. In this respect, the grammar of language can be characterised as probabilistic, rather than categorical. Thus the data can be described using a set of variable rules which constitute the grammar of a language. As Labov concludes "we are dealing with a set of quantitative relations which are the form of the grammar itself" (1969, p. 759). Poplack (1993) also observes that treating the patterns of variation as the grammar of a language bases the endeavour of grammatical description in empiricism, rather than unobservable underlying structures and rules.

The use of this methodology has succeeded in overcoming many of the analytical difficulties associated with intuitive judgements and anecdotal reporting used in other paradigms. This is particularly crucial in the study of bilingual and/or minority language situations, where normative pressures inhibit the use of vernacular or non-standard forms, and where 'categorical perception' on the part of the linguist/observer tends to inflate the importance of a form which may have in fact only occurred on a few occasions. (Poplack, 1993, p. 253)

Variationalist paradigms distinguish between non-linguistic and linguistic variables. First, some variationalist studies measure the effect of sociolinguistic factors such as age, gender and socio-economic classes, and stylistic factors such as the formality of a communicative context on the choice of one linguistic variant over another (see Chambers, 1995 for a good overview). Other studies have broadened the pool of factors to include linguistic factors. For example, in a study of the constraints on the use of passive vs active sentences, Weiner and Labov (1983) found that the choice of syntactic structure carried neither stylistic nor social significance but the choice was constrained almost entirely by syntactic factors¹⁰². In the four case studies, the use of either Gurindji-derived case markers or Kriol-derived equivalents was shown to be affected by a range of factors including sociolinguistic and structural factors. A stylistic factor - the formality of the context - was tested in the ergative study but not found to be statistically significant (see §9.5.1).

¹⁰² Questions about the legitimacy of the comparison of active and passive sentences given the dubious equivalence of their semantics have been raised in reference to this study and others (see for example Lavandera, 1996)

The only *sociolinguistic* factor, which was tested in the case studies, was age. Gender is irrelevant given that all of the participants are women (§1.6.1), and there is little differentiation in other sociolinguistic variables, such as socio-economic class. For future studies, it may be useful to create measures to quantify the degree of identification a speaker has with, for example, Gurindji identity. This type of variable was not within the scope of the studies presented, however. The sociolinguistic variable of age was found to be a significant predictor of the use of forms to mark possessive structures (§6.4.2), topological relations (§7.4.2) and goals (§8.4.2). Age was divided into three categories - 6-15 year olds, 16-25 year olds and 26+ year olds (see §1.6.1 for a more detailed discussion of these categories). Though the Gurindji forms were found to be dominant in possessive constructions, topological relations and goal constructions, speakers were shown to have an increased tendency to use Kriol forms in the youngest age group (6-15 year olds). Age-related differences tend to be interpreted in a different manner from other sociolinguistic factors in variationalist studies. Where the occurrence of other sociolinguistic variables is directly correlated with higher and lower positions on, for example, socio-economic scales, generational differences in studies are often interpreted as indicators of changes in progress (Lavandera, 1996, p. 19). Methodologically, it is better to compare samples from two points in time, as generational differences in a single corpus may merely indicate age-related trends. However, I argue that the age-related differences found in my Gurindji Kriol data are indicative of ongoing changes in the language, and emergent structures.

Though the sociolinguistic factor of age affects the choice between equivalent Gurindji and Kriol forms (and indeed convergent and double-marked forms) within the Gurindji Kriol data, *structural* factors also play a role. These factors may take a number of forms, as was seen in §9, where the factors which affect the choice of argument marking in Gurindji Kriol were discussed. For example, inherent semantic features of a nominal may affect the choice of form. In the case of argument marking in Gurindji Kriol, the Gurindji-derived ergative marker was shown to be significantly affected by agent animacy (§9.5.2). Thus inanimate agents are more likely to be marked with the ergative

marker. The use of the ergative marker may also be affected by syntactic features of the clause. For example, ergative marking was found to appear significantly more often when the agent nominal appears post-verbally (§9.5.3). Variant forms may also interact with other elements in the clause. The ergative marker is affected by the transitivity of the clause, for example, it appears significantly less when a continuative marker is found on the verb (§9.5.2).

Thus, the outcomes of functional competition between equivalent forms in formation of Gurindji Kriol and its continuing evolution are affected by variation. In many cases, more than one form is available to mark a particular function, and the choice of form is affected by sociolinguistic and linguistic variables. Moreover variation is also one of the outcomes of the process of contact and competition. In fact, it is often the situation in Gurindji Kriol that this process results in more variants than are contributed by the source languages. These new variants represent amalgams of Gurindji and Kriol, as was discussed in §10.3.

To conclude - the purpose of this final chapter has been to provide a bridge from a discussion of code-switching strategies and their role in the integration of Gurindji case-marking in the structure of Gurindji Kriol (§4-§5), to an examination of the change in these case markers in the formation of this mixed language and its continuing evolution (§6-§9). Where case markers were permitted in the mixed language clause, they did not necessarily emerge as direct copies of their Gurindji counterparts. Instead their integration in Gurindji Kriol involved a process of imperfect replication. During this process, case markers suffered from interference from Kriol functional equivalents. These equivalent forms were brought into contact and competition within the code-switching environment, and a number of outcomes and the on-going evolution of the case markers was a consequence of this process of language change.

10.5 Concluding remarks

In many ways, Gurindji Kriol provides a unique opportunity to study the birth and life of a mixed language. The socio-historical period prior to the genesis of Gurindji Kriol is well-documented due to the political struggle of the Gurindji people in reclaiming their traditional lands (§2.3). Additionally, language data, from the time immediately preceding the emergence of this mixed language, is available as a result of work done by Patrick McConvell in the 1970s (§4-§5). I have added to this available material with a large body of contemporary Gurindji Kriol data (§1.6.3). Building such a corpus has been feasible because this mixed language is the main language of the community, and the language being acquired by Gurindji children, which is not the case for most other identified mixed languages. With all of these resources, a detailed picture of Gurindji Kriol is possible. In particular, the behaviour of the case markers in Gurindji Kriol has provided rare insights into the mechanisms by which sub-systems of mixed languages emerge and grammaticalise. Whilst other subsystems such as the Kriol-derived VP have stabilised to a large extent, the case morphology continues to interact with Kriol functional equivalents, with the result that variation and change can still be observed in the use of these case markers. In this respect, the continuing evolution of the mixed language is observable.

It is likely that continuing contact with its source languages will precipitate further change in Gurindji Kriol. Indeed age-related evidence from §6-§8 suggests that aspects of Kriol grammar such as determiners and prepositions are beginning to creep into the largely Gurindji-dominated NP structure in the speech of younger Gurindji Kriol speakers. These age-related differences may represent a youth style of Gurindji Kriol; however I have suggested a diachronic interpretation which points to further development and change in Gurindji Kriol. If these changes continue along the trajectory of Kriol structural features replacing Gurindji equivalents, the predicted endpoint will be an entirely Kriol structure with some lexical contributions from Gurindji.

Over time this hypothesis will become testable. The core group of women involved in this project have children who have just entered primary school. The language data

discussed in this thesis represents the bulk of these children's language input during their main acquisition period. Follow-up work with these children will enable a continuing diachronic description of the development of Gurindji Kriol. Just as the language used by the women in this study is the result of the acquisition of the 1970s style of code-switching, these children will become the new agents in the continuing story of Gurindji Kriol. With successive generations, it remains to be seen whether the trend towards the increasing use of Kriol structural elements continues, or whether Gurindji features are maintained or even revitalised. Given that Gurindji Kriol remains in contact with its source languages, all of these options are possible. The direction Gurindji Kriol takes, then, will be largely dependent on what the new generation of Gurindji people wishes to mark with this mixed language.

APPENDIX 1. A STRUCTURAL SKETCH OF GURINDJI KRIOL

A1.1 Introduction

This appendix provides a sketch of the grammar of Gurindji Kriol. An overview of the structural split of Gurindji Kriol was given in §1.2. Here I begin with a discussion of the structure of the source languages, Gurindji and Kriol (§A1.2), and then describe the lexical split of the mixed language (§A1.3). In §A1.4, I give a brief phonological description of Gurindji Kriol and outline an argument that both Gurindji and Kriol phonologies have been maintained in a stratified phonology. A more detailed syntactic description of this mixed language follows (§A1.5-§A1.14). This appendix is by no means meant as a complete grammatical description, rather a sketch of basic Gurindji Kriol grammatical features with a focus on elements that are of particular relevance to this thesis, for example the noun phrase.

Any decent grammar of a mixed language requires a deep understanding of three grammatical systems - the mixed language itself but also the two source languages. This appendix represents a 'first pass' at a grammatical description of Gurindji Kriol, based on the data collected for this thesis (see §1.6.3.1). It is also worth noting that no published grammars of the source languages are available. I have drawn comparative information about Gurindji and Kriol from (i) an unpublished sketch grammar of Gurindji written by

McConvell (1996), (ii) two SIL grammatical descriptions of Kriol (1983; Sandefur, 1979), and (iii) my own data. Many gaps exist in these descriptions, for example the Gurindji grammar does not discuss the functions of case marking in Gurindji. Additionally the Kriol descriptions are very old and do not provide much information about variation in Kriol. As a result, I have also used my own and Erika Charola's and Jen Munro's Gurindji and Kriol data (see §1.6.2), as well as these sources. A fuller grammatical description of Gurindji Kriol is therefore something which I leave for future work.

The main part of this appendix, a grammatical description of Gurindji Kriol (§A1.5-§A1.14), is laid out according to a mix of structure and function. First many of the sections are described with respect to the main source language. For example, the NP structure of Gurindji Kriol follows Gurindji to a large extent. As a result nominals and their accompanying morphology are described with reference to Gurindji. However in many aspects of nominal morphology, functional counterparts from Kriol such as prepositions are also used in Gurindji Kriol. I have included these elements in the morphology section to illustrate the language interaction and complexity which exists within particular functional domains. In this respect this sketch grammar is also functionally driven. In all examples, the Gurindji elements are represented by italics and the Kriol elements by plain font, as elsewhere in this thesis.

A1.2 The contributing languages

A1.2.1 Gurindji

Gurindji is a Pama-Nyungan language and a member of the Ngumpin subgroup of languages which includes Ngarinyman, Bilinarra, Malngin, Nyininy, Mudburra, Jaru and Walmajarri. It is a fairly typical member of the Pama-Nyungan family, with dependent-marked argument nominals and no prefixes. Gurindji is a non-configurational language. Constituent order is largely determined by information structure, though the catalyst element with cross-referencing bound pronouns generally occurs in second position. New

or salient information is frequently found in initial position (McConvell, 2004), similar to its southern neighbour Warlpiri (Hale, 1992; Simpson, to appear; Swartz, 1988).

Gurindji uses case-marked nouns, free pronouns and cross-referencing bound pronouns to refer to arguments. It is morphologically ergative (Dixon, 1972; 1994; Van Valin, 1981) with a split case marking system which follows a commonly observed division along free vs bound pronominals (Dixon, 1994). Following Goddard's (1982) distinction between case form and case marking, Gurindji can be analysed as having a tripartite case system which distinguishes the three core case categories: ergative, nominative and accusative, which map onto the A, S and O arguments respectively. Morphologically, however, there is a three way marking split between nouns, bound pronouns and free pronouns. An accusative marking pattern in the bound pronoun paradigm is the result of syncretism between the ergative and nominative case forms, and an ergative pattern in the noun system arises from syncretism between the nominative and accusative case forms. The case forms in the free pronouns are not differentiated, with no marking distinction between the ergative, nominative and accusative categories, which distinguishes Gurindji from Warlpiri where free pronouns are marked for ergative case.

Figure 1 Core cases and their respective forms in Gurindji

CORE CASE	NOUN	BOUND PRONOUN	FREE PRONOUN
ERGATIVE (A)	<i>-ngku</i> + allomorphs	<i>-rna</i> (1SG)	<i>ngayu</i>
NOMINATIVE (S)	∅	<i>-rna</i> (1SG)	<i>ngayu</i>
ACCUSATIVE (O)	∅	<i>-yi</i> (1SG)	<i>ngayu</i>

Nouns and free pronouns are commonly ellipsed and the bound pronouns obligatorily attach to a catalyst *ngu*, as in (1). Nouns also inflect for dative case, and other peripheral cases - locative, allative and ablative. All elements of a noun phrase agree with the head in case-marking. The bound pronoun system is quite complex, distinguishing number (singular, dual and plural) and person (1st inclusive, 1st exclusive, 2nd and 3rd). Moreover

there are portmanteau forms for subject-object combinations. For example in (1), the form =*rnayinangkulu* is used which refer to a 1st person exclusive subject acting on a 3rd plural object (we→them).

- (1) *ngu=rnayinangkulu tarukap na yuwa-nana.*
 CAT=1PLEX.S→3PL.O bathe DIS put-PRS.IM
 "We bathe **them**." (Charola corpus: BWH: Bush medicine video)

The Gurindji compound verb structure is made up of an inflecting verb and a coverb. The inflecting verb provides most of the tense, aspect and mood information, and the coverb takes most of the semantic load of the verb compound. Inflecting verbs may be used on their own as in (2), or in combination with coverbs which carry additional meaning (3). Coverbs are only used on their own in subordinate clauses (4), verb chains (5), or imperatives.

- (2) *wirnanpurru ka-ngana ngu=∅=∅ kajirri-lu.*
 kangaroo **take-PRS.IM** CAT=3SG.S=3SG.O old.woman-ERG
 "The old woman **takes** the kangaroo."

- (3) *wirnanpurru lajap ka-ngana ngu=∅=∅ kajirri-lu.*
 kangaroo **carry take-PRS.IM** CAT=3SG.S-3SG.O old.woman-ERG
 "The old woman **carries** the kangaroo on her shoulder."

- (4) *yapart ngu-∅-rla ya-nana kajirri-wu [makin-ta-wu].*
 sneak.up CAT=3SG.S=3DAT go-PRS.IM old.woman-DAT **sleep-LOC-DAT**
 "(The snake) sneaks up on the old woman **who is sleeping**."
 (FHM146: VD: Bingo cards and Picture cards)

- (5) *jangkawu paya-ni [ngirljik].*
snatch bite-PST.PER **swallow**
 "He **snatched** a bite then **swallowed** it." (McConvell, 1996, p. 73)

There are only 31 inflecting verbs in Gurindji with basic meanings such as "go", "take", "put", "poke", and "hit". These verbs consist of a monomorphemic stem which then takes tense (past, present, future), aspect (im/perfect) and mood (infinitive, subjunctive, indicative) suffixes (McConvell, 1996, p. 62). In contrast to the small number of

inflecting verbs, there are hundreds of coverbs with quite specific meanings concerned with the type and manner of actions. Generally, they do not inflect although they do take some aspect suffixes, e.g. *-karra* (continuative) and case-marking in subordinate clauses. Inflecting verbs and coverbs combine to create a compound verb. McConvell (1996, p. 66) proposes that there are two kinds of compound verbs: strong and weak nexus verbs. In strong nexus compound verbs the coverb is always followed by the inflecting verb and the only element which may intervene between them is a bound pronoun complex. There is a non-compositional connection between the two verbs where the inflecting verb seems to contribute little or no meaning to the compound¹. For example, in (6) the coverb "chase" combines with the inflecting verb "hit" to create the meaning "chase". In this respect the inflecting verb has little to do with the meaning of the compound. On the other hand, weak nexus compound verbs are less strictly ordered and may be separated by other elements, as shown in (7). The meaning of the coverb and the inflecting verb are related, with the coverb specifying the meaning of the compound, as in (8).

- (6) *kirri-ngku kayikayi pa-nana bulug.*
 woman-ERG **chase** **hit-PRS.IM** cow
 "The woman **chases** the cow." (FHM146: VD: Bingo cards)

- (7) *jurlaka ya-nana karnti-yirri tiwu.*
 bird **go-PRS.IM** tree-ALL **fly**
 "The bird **flies** towards the tree." (FHM131:FO41yr: Allative pictures)

- (8) *marluka-wu na ngu=Ø=rla ma-rnana kiyap.*
 old.man-DAT DIS CAT-3SG.S-3SG.DAT **talk-PRS.IM** **whisper**
 "She **whispers** to the old man." (FHM132: CR54yr: Dative pictures)

In Gurindji Kriol, the nouns and free pronouns of Gurindji and their accompanying morphology have been retained. The bound pronoun system is no longer used, replaced by Kriol free pronouns. Gurindji Kriol also does not use the Gurindji inflecting verbs; however the coverbs have been adopted into the Kriol verb framework, as main verbs.

¹ This view of the coverb-inflecting verb complex is not shared by others. See Schultze-Berndt (Schultze-Berndt, 2000) and McGregor (McGregor, 2002) for further work on this structure in other northern Australian languages such as Jaminjung.

A1.2.2 Kriol

As was introduced in §2.2.4, Kriol is an English-lexifier creole language and the first language of most Aboriginal people across the Top End of Australia (Sandefur & Harris, 1986, p. 179). It is not spoken as a first language in most of Arnhem Land or the Daly River region. There are a number of theories about the origin and spread of Kriol varieties. Sandefur and Harris (1986, p. 179) and Dutton (1983) suggest that, in the early 1900s a cattle station pidgin was being used as a *lingua franca* between Aboriginal and non-Aboriginal people on cattle stations in many areas of northern Australia. This pidgin came from eastern Australia originally. The creolisation of this pidgin took place separately in a number of different areas, later merging into one language, Kriol. Munro (2000, p. 248) suggests an alternative hypothesis whereby Kriol found its origins in the children's dormitories of the Roper River Mission of eastern Arnhem Land. She suggests that the children came from different language backgrounds and used the cattle station pidgin to communicate with each other. Their languages included Alawa, Marra and Warndarrang (Marran) and Ngalakan and Ngandi (Gunwinyguan), which she claims now constitute the substrate of Kriol. It was in this environment that the pidgin creolised. Kriol later spread from the Roper River region, becoming the main *lingua franca* between Aboriginal people, and the first language of increasing numbers of Aboriginal people. I think that the former hypothesis is more likely given that reports of Kriol-like features can be found in many historical documents predating the Roper River Mission. However much more work, such as a typological survey of the Kriol varieties, is required before more can be said on this matter.

Structurally, Kriol is typical of most creole languages in being an isolating language with little bound morphology (McWhorter, 1998). Kriol has a freer word order than English but still marks its core arguments using SVO word order (Munro, 2005, p. 117). Peripheral arguments are marked using prepositions. Below is a brief description of the verb, noun and prepositional phrases based on Sandefur (1979) and Munro (2005).

The Kriol verb phrase is a tightly ordered complex which consists of a verb, and a tense/aspect free morpheme, auxiliary verb, and subject and object pronouns where required, as in example (9) and (10). The pronouns are optional, particularly when corresponding full NPs are present, as in (11). However pronouns, in particular, object pronouns, can be omitted even when a NP is not present. Pronouns and NPs also can occur together. The relative frequencies of these combinations is not known, and it is likely that information packaging considerations determine which form is chosen.

(9) (SUB PRONOUN) - TENSE/ASPECT - AUXILIARY - VERB - (OBJECT PRONOUN)

(10) i bin gu ged-im im
 3SG PST go get-TRN 3SG
 "He went to get it."

Preceding the verb is a tense marker *bin* (PST) and a range of aspectual markers, for e.g. *oldei* (continuative), *mait* (potential), *garra* (obligation/future) (Munro, 2005, p. 87). (11) is an example of a verb which is marked for past tense and continuative aspect preverbally.

(11) main mami **bin oldei** gemp langa gemp.
 1SG.POSS mother PST CONT live PREP camp
 "My mum **always** stayed at home." (Munro, 2005, p. 87)

The verb itself can take a small number of bound morphemes which are ordered: transitive marker, adverbial particle, aspectual marker. Transitive verbs are marked with *-im* which is derived from the third person pronoun *him* (English) or *im* (Kriol) (Meyerhoff, 1996). Adverbial particles may also be suffixed to the verb stem. These suffixes add directional meaning to verbs, though this can be quite abstract in nature. The last group of verb morphology are aspectual suffixes. Though aspect is generally expressed by auxiliary verbs, a small number of suffixes have aspectual meaning: *-bat* (continuative), *-in* (progressive), and reduplication (continuative) (Sandefur, 1979, p. 116-21).

- (12) det boi im=in **gaj-im-ap-bat** det biginini.
 the boy 3SG-PST **carry-TRN-up-CONT** the child
 "The boy was **carrying** the child."

This verb phrase structure with TAM free and bound morphemes has been adopted in Gurindji Kriol, with some alterations. §A1.11 will deal with this in more detail.

The Kriol noun phrase consists of either an independent nominal element or demonstrative or a strictly ordered combination of these elements including a determiner (demonstrative pronoun):

- (13) DETERMINER ADJECTIVE NOUN

- (14) darran, det laud-wan bebi
 that the loud-NOM baby
 "That one, the loud baby."

Nominals are a category of nouns and adjectives which are not grammatically distinguished. For example, both may modify another noun. However adjectives are derived by a number of suffixes, including an adjectival *-wan*, nominaliser *-bala* and adverbial *-wei* (Munro, 2005, p. 166-67). Demonstratives consist of demonstrative pronouns such as *darran* (that) and demonstrative adverbs *deya* (there). Munro (2005, p. 155) also describes a subclass of demonstrative pronouns, such as *det* (the) which she says are used to modify nouns. She (2005, p. 111) also refers to them as determiners, and indeed Nicholls (2006) suggests that they behave more like articles whose use is dependent on discourse factors. Aspects of the noun phrase including the determiner and adjectival morphology are in use in Gurindji Kriol. They will be discussed in more detail in §A1.9 and §A1.7.

The Kriol prepositional phrase consists of an adverbial particle, preposition and noun phrase, as in (15) and (16).

(15) ADVERBIAL - PREPOSITION - NOUN PHRASE

(16) saidwei langa det lidl gel
 beside PREP the little girl
 "Beside the little girl."

Prepositions head the Kriol PP. Kriol has a small set of semantically basic prepositions which have some regional variants (Sandefur, 1979, p. 144):

(17)	<i>langa, la, nanga, na</i>	"in, to"	(<along a)
	<i>brom, burrum</i>	"from"	(<from)
	<i>garra, garri, garram</i>	"with"	(<got)
	<i>blanga, bla, bo</i>	"for"	(<for)
	<i>blanga, bla, bo</i>	"of"	(<belonging to)

The first proposition, *langa* has the largest range. It is used to indicate the location of an action or noun in relation to another noun (time, place, person etc). In this respect it covers the English pronouns "in", "on", "under", "over", "beside" etc (18). *Langa* is also used to indicate movement towards a goal (19). The other movement related preposition is *burrum* which indicates movement away from a source, as in example (20). *Garram* is an instrumental (21) and accompaniment preposition (22), and *blanga* has a fairly large scope marking a number of semantic roles including possession (23) and benefactive. These prepositions can also be modified by an adverb which often precedes the preposition, for example *atsaid* (outside), *ontop* (up), *wansaid* (beside) (24).

(18) im silip **langa** gran
 3SG sleep **PREP** ground
 "He's sleeping **on** the ground." (Sandefur, 1979, p. 148)

(19) dumaji im=in gu **langa** riba
 because 3SG=PST go **PREP** river
 "Because he went **to** the river." (Sandefur, 1979, p. 149)

(20) olabat wandi gaman **burrum** Darwin
 3PL want come **PREP** Darwin
 "They want to come **from** Darwin." (Sandefur, 1979, p. 148)

- (21) det medel hasben bin hit-im **garra** shabel-spiya
 the NAME husband PST hit-TRN **PREP** shovel-spear
 "Myrtle's husband hit her **with** a shovel-spear." (Munro, 2005, p. 116)
- (22) mela bin oldei gu hant **garra** Cleo
 1PL.EX PST CONT gu hunt **PREP** NAME
 "We always hunted **with** Cleo." (Munro, 2005, p. 116)
- (23) langa gud-wan kantri **blanga** im dadi
 PREP good-NOM country **PREP** 3SG father
 "In the good country which **belongs to** his father." (Sandefur, 1979, p. 143)
- (24) dubala yanggel bin jidan **wansaid langa** bilibong
 two girl PST be **beside** **PREP** billabong
 "Two girls were sitting **by** the billabong." (Sandefur, 1979, p. 146)

The Kriol prepositions are not used widely in Gurindji Kriol, though they occasionally are found either singly or doubled with case-marked nouns (see §7, in particular for an account of prepositions in topological relations). A similar set of adverbial particles (coverbs) exist which are derived from Gurindji, and the Gurindji structure is consistent with the Kriol structure, making it difficult to determine its origins.

A1.3 Lexicon and language distribution

Mixed languages are defined, in part, by their degree of lexical mixing. Originally, Bakker and Mous (1994, p. 5) claimed that the prototype of a mixed language was one that contained the grammar of one language and around 90% of its vocabulary from another language. However Bakker has since refined the class of mixed languages to include a number of categories including *lexically mixed languages* where "we find a vocabulary which is equally derived from several languages" (2003, p. 120). I have already suggested in §1.2 that Gurindji Kriol fits into a subclass of this category, the V-N mixed language. Indeed though there is a relationship between the source languages and the structural split of Gurindji Kriol, lexically it is equally mixed. This section will give a general impression of the degree of lexical mixing in Gurindji Kriol using a Swadesh list count (§A1.3.1), and then map the distribution of Gurindji and Kriol lexical items

according to word class and semantic categories within these word classes (§A1.3.2). This description of Gurindji Kriol's lexicon requires further development. However a lexical analysis of Gurindji Kriol is not the main focus of either this appendix or this thesis, so I will put it aside for future research.

A1.3.1 Swadesh List

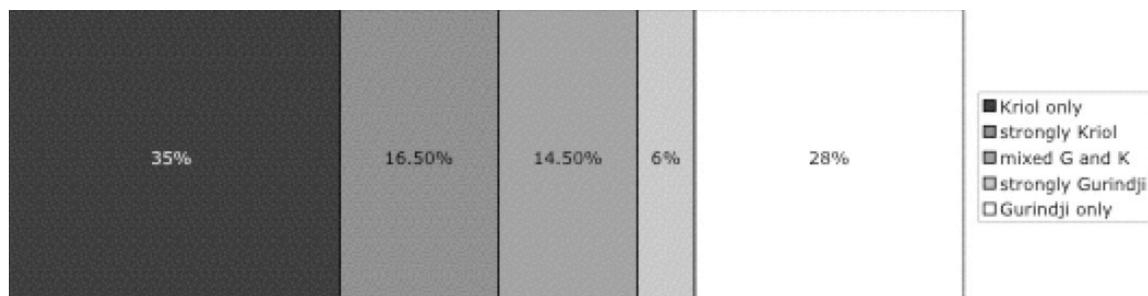
Very little has been written on the lexicons of mixed languages. Although an arbitrary value of 90% vocabulary (from the non-grammar language) was suggested at one time (Bakker & Mous, 1994, p. 5-6), there has been little systematic work on the degree and manner of lexical mixing. One paper which focuses on the lexicon is Stolz's 2003 paper on Chamorro and Malti. In an attempt to classify these two languages as mixed languages, Stolz concentrates on the degree of language mixing in the lexicon. He (2003, p. 288) notes that both Chamorro and Malti have borrowed large numbers of lexical items from a Romance language: Spanish, and Sicilian and Italian respectively. Stolz uses both a 100 word list and a 200 word list (with synonyms), finding that in the case of Chamorro 39% of words are derived from Spanish, with fewer Romance borrowings in Malti (27%). On the basis of this lexical analysis, he concludes that these two languages fall within the range of other cases of high borrowing and therefore do not qualify as mixed languages (p. 292).

I performed a similar analysis on Gurindji Kriol using a 200 word list (see Appendix 2). 14 words (7%) were always derived from Kriol because they have no equivalent Gurindji words, e.g. *snow*. The remainder are potentially synonymous, and in many cases, both the Gurindji and Kriol equivalents are in usage. In these cases, I counted the most frequently used word. For example, both the Gurindji coverb *katurl* and the Kriol verb *baitim* (bite) are used. However, impressionistically 'baitim' is used more frequently. Each of these judgements is impressionistic and more work is required to measure frequencies of word usage more systematically. In many cases both the Kriol and Gurindji equivalents were used relatively equally. These words were included in a cross-over category. In this respect my analysis of the lexicon of Gurindji Kriol looks somewhat like a continuum

with words always derived from either Kriol or Gurindji at opposing ends, and a grey category in the middle of words in which either form is used with relatively equal frequency. This grey area behaves in much the same manner as the paralexification process in Ma'a (Mous, 2003b), where speakers can choose either Gurindji or Kriol lexicon depending on the register adopted.

In general Gurindji Kriol lexical items are drawn relatively evenly from the source languages. Based on a Swadesh list count, 35% of words in Gurindji Kriol are Kriol-only forms, 28% Gurindji-only forms, and the remaining 37% are synonymous forms from both languages which are used interchangeably, depending on a number of sociolinguistic factors including group identification and the age of the addressee. For example, the Gurindji form *tipart* (jump) may be chosen if the speaker is addressing an older person, whereas the Kriol form *jam* may be used in conversation with peer groups or younger people (Meakins & O'Shannessy, 2005, p. 45). The continuum below represents the results of the Swadesh count. The left end of the scale represents the forms which are only derived from Kriol, and the right end of the scale, only from Gurindji. The grey shaded categories represent the percentage of interchangeable forms. Towards the left of the scale Kriol forms are used more frequently and the reverse holds true closer to the right of the scale.

Figure 2 Swadesh count of Gurindji Kriol and its source languages



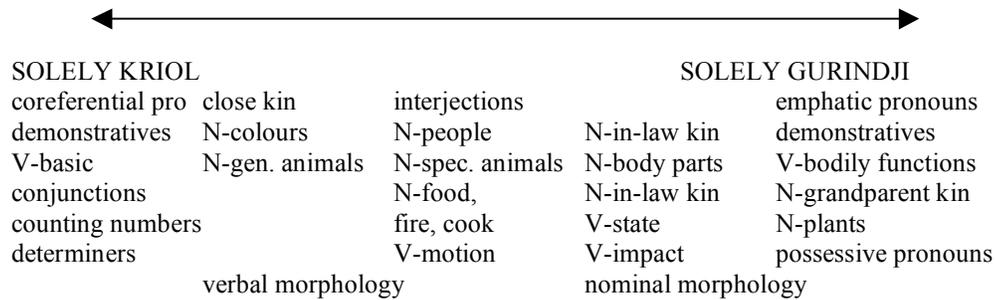
A1.3.2 Language distribution amongst word classes and morphology

Though Gurindji Kriol is lexically quite mixed, some generalisations can be made across word classes² and their accompanying morphology. In the functional word classes, one language or the other seems to dominate the word class. For example, all conjunctions, determiners §A1.9, regular pronouns §A1.8, and verbal tense, mood, negation and transitivity markers §A1.11.2, §A1.11.4 and §A1.11.5.1 are derived from Kriol, whereas emphatic and dative pronouns §A1.8, and nominal case §A1.6.3.1 and derivational morphology §A1.6.3.2 come from Gurindji. Both Gurindji and Kriol demonstrative systems are in use in the mixed language §A1.9.

Lexically, open class words are much more mixed. Nouns and verbs are adopted from both languages. However some generalisations can be made about their distribution. Basic meaning verbs such as *gu/gon* (go), *top* (be, <stop) and *kilim* (hit, <kill) are derived from Kriol, but more semantically complex verbs tend to come from the class of Gurindji coverbs. For instance, verbs of state, e.g. *makin* (sleep), motion e.g. *rarraj* (run), impact e.g. *pangkily* (hit on head) and bodily functions e.g. *paku* 'vomit', generally come from Gurindji. Nouns are equally mixed, though again some tendencies can be observed. Most generic animal nouns are from Kriol, e.g. *kengkaru* (kangaroo) and *guana* (goanna). Kin terms except mother, father, uncle, aunt come from Gurindji, e.g. *kapuku* (sister) and *jaju* (mother's mother), with all, regardless of language of derivation, having the same cultural denotation as Gurindji. Gurindji also contributes most of the body part nouns, e.g. *ngarlaka* (head), plant names, e.g. *kupuwupu* (lemon grass). Most of the question nominals, e.g. *wat* (what) and colour words *blek* (black) are derived from Kriol. However there are many mixed categories. For instance, both languages contribute nouns for people, e.g. *boi* (boy - Kriol) and *marluka* (old man - Gurindji), food, e.g. *juka* (sugar - Kriol) and *nalija* (tea - Gurindji).

² The division of word classes is described in §A1.5, and more specifically for nominals in §A1.6.2, and for elements of the VP: §A1.11.

Figure 3 *Distribution of Kriol and Gurindji elements across word classes*
(based on McConvell & Meakins, 2005)



A1.4 Phonology

The phonological system of Gurindji Kriol is stratified, that is it has maintained separate Gurindji and Kriol phoneme inventories, syllable structures and phonological processes. The continued separation of phonological systems is also reported for Light Warlpiri (O'Shannessy, 2006, p. 23). The stratified phonology of Gurindji Kriol is perhaps the result of the fact that Gurindji Kriol exists in a symbiotic relationship with its source languages in that the source languages are spoken alongside the mixed language. It has been suggested that the coexistence of two systems is theoretically impossible as it presents serious problems for the 'learnability' of a language (Rosen, 2000). However stratified systems have been observed in other mixed languages including Michif (Bakker & Papen, 1997; Papen, 1987; 2003). Indeed this is perhaps not only an observation relevant for mixed languages. For example, Latinate and Germanic vocabulary in English maintain phonological differences. This section will present evidence for the claim that Gurindji Kriol has a stratified phonology.

Both the phonological systems of Gurindji and Kriol are used in Gurindji Kriol. This stratification can be demonstrated at the level of the sound inventory, syllable structure and phonological processing. First the phonemes represented in Gurindji Kriol are the sum of the sounds from both Gurindji and Kriol. The sound inventory of the source languages are represented in the four figures below.

Figure 4 Consonant inventory of Gurindji (McConvell, 1996, p. 5)

	Bilabial	Alveolar	Retroflex	Pal-Alveolar	Velar
Stop	p	t	rt	j	k
Nasal	m	n	rn	ny	ng
Lateral		l	rl	ly	
Tap		rr			
Glide			r	y	w

Figure 5 Vowel inventory of Gurindji (McConvell, 1996, p. 5)

	Front	Central	Back
High	i		u
Low		a	

Figure 6 Consonant inventory of Kriol (based on Sandefur 1979, p. 62)

	Labial	Interdent	Alveolar	Retroflex	Pal-Alveolar	Velar
Stop	p/f	th	t/s	rt	j/sh	k
Nasal	m		n	rn	ny	ng
Lateral			l	rl	ly	
Tap			rr			
Glide				r	y	w

Figure 7 Vowel inventory of Kriol (based on Sandefur 1979, p. 61)³

	Front	Central	Back
High	i		u
Mid	e		o
Low		a	

+ **FOUR DIPHTHONGS:** ai (buy), oi (boy), ei (bay), au (bow)

³ In actual fact it is not clear whether the Kriol from this area was originally a three vowel system (under the influence of Gurindji), or a five vowel system. McConvell (per. comm.) argues that it was a three vowel system.

In actual fact, these two systems are extremely similar because Kriol's phonemic inventory is already largely a product of its substrate languages. For example, voicing is not a meaningful distinction in the stop series of either Kriol or Gurindji. However there are a number of interesting differences. First the interdental stop, /th/, is not used in Gurindji Kriol. However this stop is also not used in the regional variety of Kriol which is used west of Katherine⁴, probably because this sound is not found in the traditional languages of the area. More interestingly, Kriol has a number of fricatives (derived from English) which are used in free variation with the plosive series: p>f, t>s, j>sh. Speakers use these fricatives in more acrolectal varieties of Kriol which are closer to the English pronunciation of English-derived lexemes. For example, [kofi] is a more acrolectal version of the form *kopi* (coffee). However this plosive-fricative variation does not extend to Gurindji words in Gurindji Kriol. For example, *turrp* (poke) is never pronounced [surrf]. This restricted variation seems to suggest that the phoneme inventories of Gurindji Kriol have not merged into one sound series, but remain separate.

Gurindji Kriol has also maintained separate syllable structures for its source languages. A range of syllable structures are permissible in both languages, e.g. CV and CVC. However Gurindji and Kriol differ in whether they allow vowel initial syllables. VC syllables are allowed in Kriol, e.g. *ayan* (iron) and almost never appear in Gurindji⁵. More interestingly, Gurindji and Kriol also diverge in their use of stop-final consonant clusters which appear syllable-finally. Gurindji allows syllable-final consonant clusters, though the cluster combination is rather restricted, and generally only demonstrated on coverbs. The first consonant must be a liquid and the final consonant, a non-coronal stop or velar nasal, e.g. *jampurlk* (squash) (McConvell, 1996, p. 17). Even in the more acrolectal forms of Kriol, word final consonant clusters are never present at the surface level (Sandefur, 1979, p. 40). For example, the English verb *bump* is rendered *bam* in

⁴ [th] is found in the eastern Kimberley variety of Kriol which also has this sound in its substrate languages.

⁵ The only example is *ankaj* (poor thing) which is perhaps treated differently because it is an interjection. Vowel initial syllables are also permissible in baby talk variants of Gurindji words, e.g. *ngapulu* (milk) is commonly rendered *papu* and *apu*.

Kriol (25)(a). However the final consonant surfaces and becomes the consonant onset of the next syllable when a vowel initial morpheme is added (25)(b).

(25)

(a) i bin ged **bam** brom motika
 3SG PST get **hit** PREP car
 "He got **run over** by the car."

(b) det motika, i bin **bamp-im**
 the car 3SG PST **hit-TRN**
 "The car **ran over** him."

The same deletion process occurs in Kriol consonant clusters which are permissible in Gurindji, e.g. *mil* (milk). This difference suggests that two rules of syllable structure operate in Gurindji Kriol simultaneously.

Finally different phonological processes apply to the different component languages of Gurindji Kriol. In Kriol, the plosive series is occasionally hypercorrected to fricatives of a similar place of articulation. In this situation the process whereby fricatives from English words become stopped in Kriol is mistakenly reversed in words where this process has not been applied in an attempt to produce a more acrolectal Kriol word. For example, the 'Bucking Bull' café in Katherine is often called the 'Fucking Full'⁶ café by Kriol speakers. Though this process occurs in Kriol words in Gurindji Kriol, Gurindji words are never hypercorrected. Similarly some Gurindji phonological processes do not apply to Kriol words. For example, both Gurindji and Kriol reduplicate stems by suffixing a full copy of the stem, e.g. *wokwok* (walking) (Sandefur, 1979, p. 63) and *pat-pat* (to feel) (McConvell, 1996, p. 29). However the Gurindji process of partial reduplication can only occur in Gurindji words of origin in Gurindji Kriol. There are a number of forms of partial reduplication in Gurindji. One form used for vowel-final trisyllable words deletes the final VCV section of the first part and the initial consonant of the second part, for e.g. *kajajirri* < *kajirri-kajirri* < *kajirri* (a group of older women)

⁶ 'full' in the local variety of Australian English refers to being drunk. Though the hypercorrected form of the cafe's name is sometimes used as a joke by younger more acrolectal Kriol speakers, older speakers often use this name without realising the meaning change.

(McConvell, 1996, p. 30). This type of reduplication is still used in Gurindji Kriol for words of Gurindji origin. It cannot be applied to Kriol words in Gurindji Kriol, suggesting that phonological processes in Gurindji Kriol are source language specific.

The maintenance of separate phonological systems is surprising given the degree of mixing found in Gurindji Kriol. It is very common for single words to contain morphemes from both Gurindji and Kriol. For example, in the sentence below, three words contain a Kriol root and a Gurindji suffix.

- (26) **gel-tu** i=m teik-im **keik-ma** *nyanuny* **hawuj-jirri**.
girl-ERG 3SG=NF take-TRN **cake-DIS** 3SG.DAT **house-ALL**
 "The girl takes the cake to her house." (FHM123: CA19yr: Allative pictures)

Van Gijk (2006) suggests that the typology of the mixed language determines whether one language is subsumed into another's phonology, or whether two phonological systems are maintained. He compares Michif with Media Lengua. Media Lengua differs greatly from Michif in terms of typology. By Bakker's typology (2003, p. 111) it is an intertwined mixed language which is also agglutinating, combining Quechuan grammar (bound morphemes) with Spanish lexicon (roots) (see §1.5.1). Van Gijk (2006, p. 3) notes that, unlike Michif, Media Lengua has only one phonological system, that of Quechua, which may be the product of the level of mixing at the prosodic word level.

In Media Lengua, almost all words have both Spanish (stems) and Quechua (affixes) elements, in Michif, on the other hand, there are more unmixed words: verbs are generally Cree (both stems and affixes), noun phrases, or at least nouns, are to a large extent unmixed French. In other words, Michif has larger unmixed domains ... where French or Cree words can apply. (van Gijn, 2006, p. 16)

The mixed nature of Media Lengua words makes it difficult to maintain two phonological systems, whereas language mixing occurs at a higher point in the prosodic hierarchy making a stratified phonology more viable. However Gurindji Kriol presents some problems for this analysis. As was shown in example (26), large amounts of intra-word mixing occur in this mixed language. However the phonological systems also remain

distinct. A number of factors may explain this difference. Firstly the phoneme inventory of the Gurindji and Kriol components are extremely similar. Secondly because of this similarity there are no morpho-phonemic processes which would affect a word with a Kriol root and a Gurindji bound morpheme any differently from a word with a Gurindji root, e.g. no productive regressive harmony. Moreover Gurindji Kriol has a symbiotic relationship with its source languages. Both Gurindji and Kriol are still spoken, though Gurindji only by older people. Thus Gurindji Kriol speakers continue to have access to the phonological systems of both Gurindji and Kriol.

A1.5 Parts of speech

The word classes in Gurindji Kriol are summarised in Figure 8 and defined and discussed in more detail in the following sections. In general these categories are based on morphological and syntactic criteria. However in a number of cases, such as demonstratives, functionally equivalent categories from Gurindji and Kriol behave differently.

Figure 8 Parts of speech in Gurindji Kriol

Nominals §A1.6

Nouns

Demonstratives (see §A1.9)

 Gurindji demonstratives

 Kriol demonstratives

 Determiners

Emphatic pronouns (see 'Pronouns' §A1.8)

Interrogative nominals

Adverbial nominals

Adjectives §A1.7

Pronouns §A1.8

 Regular pronouns

 Emphatic pronouns

Directionals §A1.10

Verbs §A1.11

Main verb §A1.11.1

Auxiliary verbs §A1.11.3

Prepositions §A1.12

Exclamatives §A1.13

A1.6 Nominals

Nouns, emphatic pronouns, demonstratives and question words share a number of features including being constituents of a noun phrase (see §A1.6.1), case marking and their ability to stand alone as heads of an NP. In this respect they are classed as nominals. However there are some morphological and syntactic differences in the behaviour of these nominals which suggest that they also constitute distinct subclasses. These subclasses are discussed in §A1.6.2.

A1.6.1 The noun phrase

In many Australian languages, there is much debate about whether a coherent unit which can be considered a noun phrase exists. For example, sequences of nominals appearing in front of a second position auxiliary or catalyst, and head or edge-marking, that is marking only one element of a sequence of nouns with a case marker, are two features which have been offered as evidence for an NP in some languages. Discontinuous nominals and lack of a distinction between adjectives and nouns have been used to suggest that other languages do not possess a noun phrase. In these languages coreferential nominals are merely considered to be in apposition as part of a flat rather than hierarchical structure (Blake, 1983). Hale (1983) argues that some languages such as Warlpiri do have a noun phrase because only the final element of a sequence of nominals is case-marked. Gurindji is an example of an Australian language which has a flat nominal structure because all elements of a nominal sequence are case-marked. However Gurindji Kriol has what might be considered a more likely candidate for a noun phrase. The structure is derived

from Kriol, yet the way the NP relates to the verb, through case structure, comes from Gurindji.

The Gurindji Kriol noun phrase consists of a head plus a number of potential modifiers. The order of noun phrase constituents is relatively fixed. Where a determiner is present, it precedes the head. Other modifiers may precede or follow the head, though they tend to precede the head. Discontinuous NPs are also possible in Gurindji Kriol:

Figure 9 Structure of a noun phrase

(DETERMINER) - (MODIFIER) - HEAD - (MODIFIER)

Potential heads are: nouns, nominalised adjectives, emphatic pronouns and demonstratives; and modifiers are determiners, demonstratives and adjectives. Heads and modifiers may be distinguished by their ability to take case marking. Heads are case-marked, and modifiers are not. This distinction does not apply to Gurindji where all coreferential nominals with the same grammatical function agree for case (§A1.2.1). Occasionally speakers do attach case suffixes to all elements (except the determiner) of a Gurindji Kriol noun phrase but this is only when they are approximating Gurindji. (27) is a typical example of a complex noun phrase. The subject noun phrase consists of an ergative-marked head noun which is preceded by a determiner and an adjective.

- (27) **det yapakayi karu-ngku** i bin gon ged-im-bat det *karu*.
the small child-ERG 3SG NF go get-TRN-CONT the child
 "The small kid goes to get the (other) kid." (FM019.A: SE12yr: Monster story)

Though most NPs have this order, the case marker cannot be analysed as an edge-marking clitic. Regardless of the order of modifier and head, the head is always case-marked as is demonstrated in (28). The head *hol* (hole) is followed by a modifier *walyak* (inside) but is case-marked nonetheless. This order is more common in locational noun phrases than in core-case marked noun phrases. In general, this type of head-marking is not common in Australian languages (Dench & Evans, 1988, p. 4).

- (28) det *karu-ngku* i=m luk **hol-ta** *walyak*.
 the child-ERG 3SG.NF look **hole-LOC** **inside**
 "The child looks **inside the hole**." (FHM144: LS20yr: Frog story)

Some modifiers may behave like heads. In these situations they are case-marked. For example, in (29) *man* is the head of a subject noun phrase and is therefore marked for ergative case. The demonstrative, *nyawa* (this), modifies this noun and is not case-marked. However the same demonstrative in (30) is the head of the subject noun phrase and therefore receives ergative case marking.

- (29) *nyawa* man-*tu* i=m pik-im-ap fayawud.
this man-ERG 3SG.NF pick-TRN-up firewood.
 "This man is picking up firewood." (FHM070: LS20yr: Ergative pictures)

- (30) *nyawa-ngku* garra ged-im Shadow.
this-ERG FUT get-TRN NAME
 "This one will steal Shadow (the dog)." (FM018.A: SS18yr: Monster story)

A1.6.2 Nominal subclasses

Nouns are the prototypical head of the Gurindji Kriol NP. They form an open class of proper and common nouns, kinship terms and numerals. Lexically nouns are derived from both Gurindji and Kriol, and inflect for seven cases (§A1.6.3.1).

Emphatic pronouns are virtually indistinguishable from nouns because they are case-marked (where they were not in Gurindji). They also act as noun phrase heads and inflect for seven cases. However these pronouns form a closed class, which are derived from Gurindji free pronouns. These pronouns distinguish first (inclusive and exclusive), second and third person, and singular, dual and plural number. They are cross-referenced by a separate set of Kriol pronouns (§A1.8).

Adverbial nominals are a closed class which consist of locationals and time nominals. The Gurindji Kriol locationals are based on verticality (up/down) and are derived from both Gurindji and Kriol. They take spatial case-marking, including locative, ablative and

allative case when they are the head of a noun phrase, as in example (31). As modifiers of place nouns, they are unmarked (32). The allative marker for directionals, *-k* differs from the other nominal allomorphs, *-ngkirri*, *-jirri*. This marker is the last vestige of a much more complex Gurindji system. An example is given in (33).

- (31) det *karu* an *warlaku-ngku* tubala *lawurr* mijelp
 the child and dog-ERG 3DU hug REFLX

kanyjurra-ngka.

down-LOC

"The kid and dog hug each other **down there**." (FHM144: LS20yr: Frog story)

- (32) najan *warlaku* *makin* **tebul-ta** *kanyjurra.*
 another dog sleep **table-LOC** **down**

"Another dog sleeps **underneath the table**."

(FHM027: CA19yr: Locative pictures)

- (33) *warlaku-ngku* i=m *karrap* *kankula-k.*
 dog-ERG 3SG=NF look.at **up-ALL**
 "The dog looks **upwards**." (FHM168: CE25yr: Frog story)

Time nominals are also marked with spatial case, hence their membership in the adverbial nominal class. The complex Gurindji absolute directional system based on the river drainage is not used in Gurindji Kriol, and the Gurindji cardinal system is rarely used (Charola, 1999). Another difference between Gurindji Kriol and Gurindji locational nominals is in case marking. In Gurindji directionals are inherently locative and therefore do not receive locative case. In contrast they receive locative case in Gurindji Kriol. Aside from a small section on directionals §A1.10, the adverbial nominals, and directional and temporal system will not be described in any more detail in this thesis.

Demonstratives in Gurindji Kriol form a closed but mixed class of Gurindji and Kriol demonstratives, which have basically maintained the formal properties of their source languages. For example, whilst both sets of demonstratives distinguish between proximal and distal forms, the Gurindji demonstratives inflect for case and the Kriol demonstratives do not. Rather they consist of a separate set of demonstrative pronouns

and adverbs. In this respect, there is not a coherent class of demonstratives in Gurindji Kriol. Nonetheless the sets from Gurindji and Kriol will be examined together (§A1.9).

Interrogative nominals are a closed class derived from Kriol. Some are optionally case marked and act as the heads of noun phrases. They are listed here briefly, and a case-marked example provided (34). The tag question *wayi* is also included here. I will not discuss these in any more detail:

Figure 10 *Interrogative nominals*

FORM	MEANING
wat	what
wen	when
weya(-ngka)	where(-LOC)
wijei(-ngka)	where(-LOC)
wijei	how
wijan(-tu)	who(-ERG)
wijan(-ku/-tu)	whose(-DAT)
hu	who
watbo	why
wayi	tag question

- (34) **weya-ngka** i-irra bait-im nyuntu?
where-LOC 3SG-FUT bite-TRN 2SG
 "Where's it going to bite you?" (FM044.A: SE12yr: Conversation)

A1.6.3 Nominal morphology

This section will discuss the form and function of nominal morphology in Gurindji Kriol. It will be more detailed than other sections as the focus of this thesis is nominal morphology. Almost all of the nominal morphology is derived from Gurindji, though in many cases the allomorphy and functional domains have changed somewhat. Equivalent elements from Kriol, such as prepositions, are also found in the same functional domain. These elements will be dealt with together in the following section.

A1.6.3.1 Case morphology

Like Gurindji, I analyse Gurindji Kriol as having three core case categories - ergative, nominative and accusative. Although the table below shows syncretism between nominative and accusative case forms, the pronoun paradigm (§A1.8) distinguishes between these categories, instead showing syncretism between nominative and ergative pronoun forms. The result is a split ergative system, where nouns show an ergative pattern and the pronouns, an accusative pattern (Silverstein, 1976). As well as the core case forms, Gurindji Kriol has one more grammatical case marker, the dative, and three peripheral case forms which are local cases: locative, allative and ablative. Figure 11 summarises these forms.

Figure 11 *Gurindji Kriol case markers*

	CORE			PERIPHERAL			
	ERG	NOM	ACC	DAT	LOC	ALL	ABL
V-FINAL	<i>-ngku</i>	-	-	<i>-yu/-wu</i> ⁷	<i>-ngka</i>	<i>-ngkirri</i>	<i>-nginyi</i>
C-FINAL	<i>-tu</i>	-	-	<i>-tu/-ku</i>	<i>-ta</i>	<i>-jirri</i>	

A number of generalisations may be made about the use of Gurindji case morphology in Gurindji Kriol. Although the Gurindji system is in use in Gurindji Kriol, there are some differences in the form and function of this set of morphology. Generally speaking, Gurindji Kriol makes use of a reduced set of Gurindji case allomorphs, and in some cases, these forms have changed. As already discussed, in Gurindji, agreement marking occurs across the noun phrase, whereas in Gurindji Kriol only the head of a noun phrase is case marked, which is a key structural difference (see also §A1.6.1). Finally Gurindji case forms are found in variation with Kriol functional equivalents such as prepositions.

First, the allomorphic variation found in Gurindji Kriol case allomorphy is a linguistic simplification of the original Gurindji system which is shown in Figure 13 (ergative),

⁷ These variants are conditioned by a sociolinguistic variable, age, and are described in §A1.6.3.1.2.

Figure 15 (dative), Figure 17 (locative), Figure 19 (allative), Figure 21 (ablative). This type of allomorphic simplification is often described in situations of language change. For example, Meakins and O'Shannessy (2004) observed a similar pattern of simplification in another Australian mixed language, Light Warlpiri. Schmidt (1985b, p. 47-51) noted in the 1980s that younger speakers of Dyirbal had reduced the number of ergative allomorphs found in traditional Dyirbal in a five stage reduction process. Another Australian youth language, Areyonga Teenage Pitjantjatjara, provides an innovative twist to allomorph reduction (Langlois, 2004). Traditional Pitjantjatjara uses different ergative allomorphs with vowel-final and various different consonant-final stems. Areyonga Teenage Pitjantjatjara only uses the vowel-final ergative allomorph. Consonant-final stems are rendered vowel-final with an augmentative *-pa* which is more generally used to make consonant-final nouns which are not case-marked (e.g. zero-marked direct objects) into vowel-final words. Langlois (2004, p. 56) suggests that *-pa* has been reanalysed as a part of the stem hence the reduction in ergative allomorphy. And in Warumungu, younger speakers have lost allomorphs based on whether or not the stem has two syllables, using the "more than 2 syllables" allomorph in all cases (Simpson, per. comm.).

Finally the application of all Gurindji case markers in Gurindji Kriol is optional to differing extents. Most interact with their Kriol equivalents in some way. For instance, the use of the ergative case is affected by Kriol SVO word order, and local case forms and the dative marker are used in variation with equivalent Kriol prepositions. Similar types of various have been reported for Light Warlpiri (O'Shannessy, 2006, p. 56 onwards).

Figure 12 Gurindji case markers and their Kriol equivalents in Gurindji Kriol

GURINDJI CAT.	FORM	KRIOL CAT.	FORM	FUNCTION
Ergative marker	<i>-ngku</i> <i>-tu</i>	Word order	SVO SV	Argument marking
Dative marker	<i>-tu, -ku</i> <i>-yu, -wu, -u</i>	Preposition	<i>bo</i>	Indirect object Possession Benefactive Animate goal
Locative marker	<i>-ngka</i> <i>-ta</i>	Preposition	<i>la</i> <i>langa</i>	Location
Allative marker	<i>-ngkirri</i> <i>-jirri</i>	Preposition	<i>la</i> <i>langa</i>	Goal
Ablative marker	<i>-nginyi</i>	Preposition	<i>brom</i>	Source

The final four chapters of this thesis examine the interaction of Gurindji case markers and Kriol functional equivalents within particular domains in more detail. The aim of this section is to describe the allomorphy of these case markers and their functional range.

A1.6.3.1.1 Ergative marker

§9 describes the use of the ergative marker in the transitive clause in detail. It will be shown that transitive subjects are only marked optionally in Gurindji Kriol, and the appearance of the ergative marker is dependent on a number of factors including word order, the presence of a co-referential pronoun, transitivity variables such as animacy, and information structure. This section serves as an introduction to the allomorphy and functional range of this case marker within and beyond the transitive clause.

The ergative marker in Gurindji has seven allomorphs which depend on the number of syllables in the stem and the closure of the stem-final sound. Two allomorphs are associated with the vowel final stems and depend on the number of morae in the stem. The allomorphs which attach to consonant final stems distinguish place of articulation: peripheral (bilabial or velar) and coronal-final; and manner: liquid-final. Gurindji Kriol

has reduced this system to a two-way distinction between consonant and vowel-final stems.

Figure 13 Allomorphic changes in the ergative case marker in Gurindji Kriol

GURINDJI*			GURINDJI KRIOL	
VOWEL FINAL	DISYLLABIC	<i>-ngku</i>	VOWEL FINAL	<i>-ngku</i>
	MULTISYLLABIC	<i>-rlu</i>		
CONSONANT	PERIPHERAL	<i>-kulu</i>	CONSONANT	<i>-tu</i>
FINAL	CORONAL	<i>-tu, -rtu</i>	FINAL	
	LIQUID	<i>-u</i>		
	PALATAL	<i>-ju</i>		

* (McConvell, 1996, p. 38-39)

In Gurindji the ergative marker has a number of functions. It encodes the argument structure of a clause by marking subjects of transitive verb (A), including interrogative nominals. It also has an instrumental function and is found on adverbs of manner (in agreement with A). In Gurindji Kriol the ergative marker has become optional in all of these domains. The change in function of the ergative marker is summarised in the table below.

Figure 14 Functions of ergative marker in Gurindji and Gurindji Kriol

	GURINDJI	GURINDJI KRIOL
SUBJECTS OF TRANS CLAUSES	obligatory	optional
SUBJECTS OF SEMI-TRANS CLAUSES	optional	optional
SUBJECTS OF INTRANS CLAUSES	never	optional
ADVERBS OF MANNER IN TRAN CLAUSES	obligatory	optional
INSTRUMENTS	obligatory and sometimes also with proprietive marker	never, only proprietive marker used (§A1.6.3.2.6)
QUESTION NOMINALS ACTING AS A ARGUMENT	obligatory	optional

The ergative marker is used 66.5% of the time on subjects of transitive clauses in Gurindji Kriol, as in example (35). It is more likely to be found on post-verbal subjects, inanimate subjects (which can be construed as a type of instrument, but one where there is no animate agent), subjects of highly transitive verbs and where the subject is co-referenced by a pronoun). In this respect I analyse the ergative marker to have taken on discourse properties, highlighting the agentivity of subject nominals. All of this is described in §9.

- (35) *warluku-ngku* i bin bait-im det *marluka* *wartan-ta*.
dog-ERG 3SG NF bite-TRN the old.man hand-LOC
 "The dog, it bit the old man on the hand." (FHM082: AC11yr: Locative pictures)

The ergative marker is also found on subjects of intransitive clauses in Gurindji Kriol. The ergative marker serves to emphasise the activity of the entity it attaches to in these constructions. (36) is an example of this function. (37) is an example of a more idiomatic use of the ergative marker on an intransitive subject. When a small child falls over, a nearby adult often exclaims affectionately "The old man/old woman falls over", and

attaches an ergative marker to the subject. It is unclear whether the latter idiomatic usage is possible in Gurindji.

- (36) an det *kaya-ngku* bai jeya luk *makin* *nganta*.
 and the **monster-ERG** sleep there look sleep DOUBT
 "And **the monster** sleeps there, look it's sleeping there I think."
 (FM020.C: SS18yr: Monster story)

- (37) ah *marlaku-ngku* baldan
 ah **old.man-ERG** fall.down
 "Oh whoops my little boy falls over!" (lit: The old man falls over)
 (FM003.A: RR23yr: Conversation)

The ergative marker is also found on question nominals in the transitive subject function where the verb refers to a negative action such as hitting or biting, as in (38). It is also occasionally found on question nominals in the intransitive subject function (39).

- (38) **wijan-tu** kil-im yu?
who-ERG hit-TRN 2SG
 "Who hit you?" (FM001.A: SE12yr: Conversation)

- (39) an **wijan-tu** *makin* *nyila-ngka*?
 and **who-ERG** sleep that-LOC
 "And **who** sleeps there?" (FM036.A: SS18yr: Conversation)

The ergative marker is optionally applied to adverbs in both transitive (40) and intransitive clauses (41).

- (40) ib yu *karan-karra* mijelp **hard-wan-tu** yu=l meik-im
 if 2SG scratch-CONT REFLX **hard-NMZ-ERG** 2SG=FUT make-TRN

 mijelp *kungulu*.
 REFLX bleed
 "If you keep scratching yourself **hard**, you'll make yourself bleed."
 (FHM029: TJ22yr: Conversation)

- (41) *yamak-tu yamak-tu yu gu yamak-tu.*
 slow-ERG slow-ERG 2SG go slow-ERG
 "Slowly, slowly, you go slowly." (FM018.A: SS18yr: Conversation)

The final place an ergative marker occurs is on the 2nd person singular pronoun associated with transitive imperative constructions. This usage is never found in Gurindji. In these cases, the ergative marker has a contrastive function. For example, in (42) CR is pretending to feed a baby doll and attempts to convince her grandson to take over the activity. She contrasts his lack of agency with her own with the use of the ergative marker (see §9.6.1 for more detail on contrast). No such examples have been found in intransitive clauses.

- (42) *nyuntu-ngku yu garra bid-im im.*
 2SG-ERG 2SG FUT feed-TRN 3SG.O
 "It's **you** who has to feed him." (FM030.A: CR54yr: Conversation)

A1.6.3.1.2 Dative marker vs preposition

In Gurindji, the dative marker appears in allomorphic variation, *-wu*, *-ku* and *-u*. The *-wu* form appears after a vowel-final stem, *-ku* after a consonant-final stem, and *-u* when the stem ends with a liquid. Some changes can be observed in Gurindji Kriol. First the liquid distinction has been discarded, with liquid-final stems being treated as consonant-final stems. Aside from this general change, two groups which use different dative allomorphy seem to have emerged. Group 1 (mostly older speakers) maintains the traditional Gurindji allomorphic *-wu* and *-ku* variants, with the addition of a *-yu* allomorph after back vowels. However, younger Gurindji Kriol speakers (Group 2) have formed a new system of allomorphy which uses different forms: *-yu* for vowel final stems, and *-tu* for consonant final stems. The *-tu* is a curious form because it overlaps with the Gurindji Kriol consonant-final ergative form. However it is unlikely that the use of *-tu* as a dative indicates a conflation of these case markers into one general core-case marker, as this homophony is not extended into the vowel final allomorphs, *-ngku* (ergative) versus *-yu* (dative). Figure 15 lays out the changes from Gurindji to Gurindji Kriol (Meakins & O'Shannessy, 2005, p. 51).

Figure 15 Allomorphic changes in the dative case marker in Gurindji Kriol

GURINDJI*		GURINDJI KRIOL			
VOWEL FINAL	-wu	VOWEL FINAL	FRONT	Group 1	-wu
			NON-F		-yu
			FRONT	Group 2	-yu
			NON-F		-yu
CONSONANT FINAL	-ku	CONSONANT FINAL		Group 1	-ku
		(INC LIQ)		Group 2	-tu
LIQUID FINAL	-u				

* (McConvell, 1996, p. 38-39)

The distinction between these two Gurindji Kriol groups is age related, and can be demonstrated through the distribution of *-tu* and *-ku* allomorphs (the vowel final allomorphs cannot be examined due to an overlap between the two groups with the use of the *-yu* allomorph). Older speakers use the *-ku* allomorph and the *-tu* allomorph is generally only used by speakers under the age of twenty, suggesting that it is a recent innovation. Speakers generally fall into one of these two groups, however there is some within-speaker variation.

The function of the dative marker in Gurindji Kriol is much the same as for Gurindji. However in some cases, the dative marker alternates with the Kriol preposition *bo* (<for) or a nominal is double-marked with dative case and the Kriol preposition. This alternation will be discussed in more detail in §6. The dative marker marks indirect objects, the dependent nominal in a possessive construction, benefactives, inanimate goals and verbs in subordinate clauses in purposive constructions. The variation in the use of the dative marker and preposition and the functions of these elements is represented in the figure below.

Figure 16 Functions of dative marker in Gurindji and Gurindji Kriol

	GURINDJI	KRIOL	GURINDJI KRIOL
INDIRECT OBJECTS	dative marker -ku, -wu	preposition bo	-tu/-ku, -yu, -wu *bo double-marking
INALIENABLE POSSESSION	unmarked	preposition bo	-tu/-ku, -yu, -wu
ALIENABLE POSSESSION	dative marker -tu/-ku, -yu, -wu	preposition bo	-tu/-ku, -yu, -wu
BENEFACTIVE	dative marker -tu/-ku, -yu, -wu	preposition bo	-tu/-ku, -yu, -wu bo double marking
ANIMATE GOAL	dative marker -tu/-ku, -yu, -wu	preposition bo	-tu/-ku, -yu, -wu bo double marking
PURPOSE	dative marker -tu/-ku, -yu, -wu	preposition bo	-tu/-ku, -yu, -wu bo double marking

*indicates most commonly used form

First, the dative marker is used to mark indirect objects. For instance, in (43) below *jurlaka* (bird) is the complement of the semi-transitive verb *warlakap* (look around) and receives dative marking. Perception verbs and talking verbs are the most common verbs which take dative objects. Other verbs which take indirect objects are "give" and "take" verbs and "be frightened of". These are described in more detail in §A1.14.2.5 and §A1.14.2.6 in simple clauses. The dative marker also exists in variation with the Kriol preposition in these types of constructions (44), and double marking is also common with teenage speakers (45).

- (43) *jirri-bala malyju dei gon warlakap jurlaka-yu.*
 three-NMZ boy 3PL.S go look.around **bird-DAT**
 "The three boys, they go looking around **for birds**."
 (FM011.A: ER26yr: Bird story)

- (44) *nyawa-ma dei=m gu warlakap bo jurlaka ...*
 this-DIS 3PL.S=NF go look.around **PREP bird ...**
 "They go searching **for birds** (with their shanghais)."
 (FM010.C: SU40yr: Bird story)

- (45) *jirri-bala karu dei gu warlakap bo jurlaka-wu.*
 three-NMZ child 3PL.S go look.around PREP bird-DAT
 "Three kids, they go looking around **for birds**." (FM010.C: SU40yr: Bird story)

The dative marker is also used in possessive constructions. The Kriol equivalent is rarely used in these structures. Here the dative marker relates two noun phrases. The distinction between inalienable nouns (e.g. body parts, shadows) and alienable nouns (e.g. tools, people, cars etc) which was active in Gurindji is not made in Gurindji Kriol, see (46) and (47). Vestiges of the system can be noted, however. See §6 for a detailed explication of the dative marker and possessive constructions.

- (46) *yu gat eni kengkaru-yu ngarlaka?*
 2SG have any kangaroo-DAT head
 "Have you got the **kangaroo's head**?" (FHM001: AC11yr: Possession cards)

- (47) *kaya bin kom jawurra papap, Nima-yu papap.*
 monster NF come steal puppy, NAME-DAT puppy
 "The monster came to steal the puppy, **Nima's puppy**."
 (FM022.B: CA19yr: Monster story)

The dative marker is also found on interrogative nominals (48). They only have a possessive meaning in these constructions ("whose"). For example, these constructions never refer to indirect objects ("for whom").

- (48) *ah wijan-ku langa na nyawa.*
 ah who-DAT ear DIS this
 "Ah **whose** ear is this one?" (FM032.B: CA19yr: Possession books)

The dative marker may also be used to mark a nominal beneficiary, for instance *pujikat* (cat) in (49). Again the Kriol preposition *bo* also functions in this way (50).

- (49) *i=m fil-im-ap ngapulu nganta nyanuny pujikat-tu.*
 3SG.S=NF fill-TRN-up milk DOUBT 3SG.DAT cat-DAT
 "She seems to be filling up a saucer of milk **for her cat**."
 (FHM100: SS18yr: Locative pictures)

- (50) *jintaku kajirri-ngku i bin fil-im-ap nyanuny*
 one old.woman-ERG 3SG.S NF fil-TRN-up 3SG.DAT

ngapulu bo pujikat.
 milk PREP cat

"One old woman filled up a saucer of milk **for the cat.**"

(FHM056: SS18yr: Locative pictures)

Datives also mark animate goals, though the distinction between beneficiary construction and goal constructions is not clear because these two constructions do not differ in the use of the dative marker. For example, in (51) the goal of *teikim* (take) is *kajirri* (old woman) which is also marked with a dative marker. However benefactive and goal constructions pattern differently if inanimate goals are also considered. Inanimate goals are marked with an allative, as in (52), but receive a dative marker if they are a beneficiary (no example given here). This difference in patterning suggests that beneficiary and goal constructions should be considered separately. §8 considers goal constructions in more detail.

- (51) *gel-tu i=m teik-im keik kajirri-yu*
 girl-ERG 3SG.N=NF take-TRN cake **old.woman-DAT**

makin-ta karnti-ngka.
 sleep-LOC tree-LOC

"The girl takes the cake **to the old woman** who is sleeping under the tree."

(FHM142: LS20yr: Allative pictures)

- (52) *jintaku kirri i=m teik-im keik shop-jirri.*
 one woman 3SG.S=NF take-TRN cake **shop-ALL**
 "One woman takes a cake **to the shop.**" (FHM125: LE18yr: Allative pictures)

The final use of the dative marker on a nominal is in a purposive function. In (53), the *ngarlu* (honey) takes dative case, indicating that it is the purpose for the action of hitting the tree. A Kriol preposition or double-marking is also found in these constructions.

- (53) *gel-tu i=m kil-im-bat karnti ngarlu-yu*
 girl-ERG 3SG.S=NF hit-TRN-CONT tree **honey-DAT**
 "The girl hits the tree **in order to get honey.**" (FHM062: SS18yr: Bingo cards)

A verbal construction which looks similar to the nominal purposive function also uses the dative marker. The dative marker attaches to a verb, creating a subordinate clause (54). Temporally, the dative marks the event in the second clause as occurring after the time of the event in the main clause. The use of case-markers such as the dative in a complementiser function is very common in Australian languages (Dench & Evans, 1988, p. 18). Again, Kriol prepositions are also used for this function, see (55).

(54) *dei weik-im-ap im na tarukap-ku dringk-im-ku manyanyi.*
 3PL.S wake-TRN-up 3SG.ODIS **bathe-DAT** **drink-TRN-DAT** bush.med
 "They wake her up now **in order to bathe and drink** the manyanyi
 medicine mix." (FM039.E: LE18yr: Sick woman story)

(55) *ngali garra gon bo tarukap.*
 1DU.INC FUT go **PREP bathe**
 "You and I will go there **in order to swim.**" (FM031.B: JG43yr: Conversation)

A1.6.3.1.3 Locative marker vs preposition

The Gurindji locative allomorphs have similar forms to the ergative marker, though they are *a*-final forms (ergative forms are *u*-final). The allomorphs also follow a similar pattern to the ergative marker. They vary according to the final sound of the stem and the number of syllables in the stem. Gurindji Kriol has reduced the number of Gurindji allomorphs to just two, distinguishing only vowel-final and consonant-final environments. These allomorphic changes are parallel to those described for the ergative marker §A1.6.3.1.1, and are summarised in Figure 17.

Figure 17 Allomorphic changes in the locative case marker in Gurindji Kriol

GURINDJI*			GURINDJI KRIOL	
VOWEL FINAL	DISYLLABIC	<i>-ngka</i>	VOWEL FINAL	<i>-ngka</i>
	MULTISYLLABIC	<i>-rla</i>		
CONSONANT FINAL	PERIPHERAL	<i>-kula</i>	CONSONANT	<i>-ta</i>
	CORONAL	<i>-ta, -rta</i>	FINAL	
	LIQUID	<i>-a</i>		
	PALATAL	<i>-ja</i>		

* (McConvell, 1996, p. 38-39)

The main function of the locative marker in Gurindji Kriol is to mark the location of an object in relation to a person, place, object or event. It is also used to mark intransitive verbs in main and subordinate clauses. The function of the locative is a bit unclear in these clauses but is discussed below. Finally the locative marker marks inanimate goals. Figure 18 summarises these functions. Though the locative marker is dominant in all of these functional domains, occasionally the Kriol preposition *langa* is found in conjunction with the locative marker. The Kriol preposition is rarely found on its own.

Figure 18 Functions of locative marker in Gurindji and Gurindji Kriol

	GURINDJI	KRIOL	GURINDJI KRIOL
LOCATION (PLACE, TIME)	locative marker <i>-ngka etc</i>	preposition <i>la/nga</i>	* <i>-ngka, -ta</i> double marking
SWITCH REFERENCE	locative marker <i>-ngka etc</i>	-	-
INTRANS VERBS MAIN CLAUSES	-	-	<i>-ngka, -ta</i>
GOAL		preposition <i>la/nga</i>	<i>-ngka, -ta</i> * <i>la/nga</i>

*indicates most commonly used form

The most common use of the locative marker is to mark the location of one entity relative to another entity or action. For example, in (56), the locative marks the location of the activity of "biting". Occasionally teenage speakers also use a Kriol preposition with the locative in a double-marked construction, as in (57). Note that while the language of the stems in these examples differ, language does not affect the choice of marking. This type of construction may signal the start of a shift towards a more prevalent use of Kriol prepositions instead of Gurindji local case markers, or alternatively to a system like German where prepositions require case-marking on their complements. This shift will be discussed in §7.

- (56) an *warluku-ngku* i bin bait-im det *marluka* **wartan-ta**.
 and dog-ERG 3SG.S NF bite-TRN the old.man **hand-LOC**
 "And the dog bit the old man **on the hand**."
 (FHM082: AC11yr: Ergative pictures)

- (57) *jintaku* *warlaku-ngku* i bin bait-im im *marluka*
 one dog-ERG 3SG.S NF bite-TRN 3SG old.man
la leg-ta.
 PREP **leg-LOC**
 "One dog bit the old man **on the leg**." (FHM052: AC11yr: Ergative pictures)

Unlike Gurindji, the locative marker is also used to mark goals in Gurindji Kriol by younger speakers. Goal marking will be discussed in §8.

- (58) dei bin gu-bek *nyarruluny* **hawuj-ta**.
 3PL.S NF go-back 3pl.DAT **house-LOC**
 "They went back **to their house**." (FM010.A: AC11yr: Allative pictures)

The locative suffix marks intransitive verbs in main and subordinate clauses, for example (59). It is likely that this construction is derived from the Gurindji switch reference construction where the verb in a reduced subordinate clause takes locative marking. In these Gurindji constructions the function of the locative is to indicate that the subject of the subordinate clause is the same as that of the main clause. The function of the locative marker on Gurindji Kriol intransitive verbs in main and subordinate clauses is not clear.

Charola (2002, p. 17) has suggested that it might have a similar function as the continuative morpheme *-karra*. This morpheme generally attaches to transitive verbs in main clauses. In Gurindji this morpheme is also used in subordinate clauses possessing a similar stative function as the locative. The fact that there is some cross-over in function between the locative and continuative in subordinate clauses may have paved the way for the locative to be used in main clauses and have a similar continuative function. Indeed in Gurindji Kriol the continuative and locative seem to exist in complementary distribution with the continuative used on transitive verbs and the locative on intransitive verbs. See §A1.11.5.3 for examples of continuative marking on transitive verbs.

- (59) *karu pleibat-ta futbal-jawung nyantu-rayinyj.*
 child **play-LOC** football-PROP 3SG-ALONE
 "The child is **playing** with the football on his own."
 (FHM035: CR54yr: Locative pictures)

A1.6.3.1.4 Allative marker vs preposition

Gurindji Kriol has retained the Gurindji consonant-final stem allomorph of the allative marker. However a new form has been created for the vowel-final stems, *-ngkirri*. Potentially this variant may be a phonological blend of *-yirri* and *-ngkurra*.

Figure 19 Allomorphic changes in the allative case marker in Gurindji Kriol

GURINDJI*			GURINDJI KRIOL	
VOWEL FINAL	DISYLLABIC	<i>-ngkurra</i>	VOWEL FINAL	<i>-ngkirri</i>
	MULTISYLLABIC	<i>-ngkurra, -yirri</i>		
CONSONANT FINAL		<i>-jirri</i>	CONSONANT FINAL	<i>-jirri</i>

* (McConvell, 1996, p. 38-39)

The allative marker has only one function in Gurindji Kriol. It is used to mark inanimate and place name goals. In this respect it alternates with zero-marking and the Kriol preposition, *la/nga*. The allative is used in Gurindji in switch reference constructions to indicate that the subject of the subordinate clause is the object of the main clause. This

construction and accompanying allative function is not used in Gurindji Kriol. These functions are summarised in Figure 20.

Figure 20 Functions of allative marker in Gurindji and Gurindji Kriol

	GURINDJI	KRIOL	GURINDJI KRIOL
GOALS (INANIMATE)	allative marker <i>-ngkurra etc</i>	preposition <i>la/nga</i>	allative marker *preposition ∅-marked
GOALS (PLACE NAME)	*∅-marked allative marker <i>-ngkurra etc</i>	*∅-marked preposition <i>la/nga</i>	allative marker preposition *∅-marked
SWITCH REFERENCE	allative marker <i>-ngkurra etc</i>	-	-

*indicates most commonly used form

The main use of the allative marker is to mark inanimate goals which may be places or objects, for example cars. The allative marker alternates with the Kriol preposition *la/nga*, locative marker and also ∅-marking which is also used in both Gurindji and Kriol to mark place names. Note that unlike with location, double-marking is not found in this functional domain in my dataset. The main means of marking inanimate goals is the allative marker, though ∅-marking is also common, as is the use of *langa*. §8 deals with goal marking in more detail.

Below are examples of inanimate goal marking using the allative marker (60), the Kriol preposition 0 and ∅-marking (62); and place name marking using the allative marker (63), the Kriol preposition (64) and ∅-marking (65).

- (60) Humbug bin gon **riba-ngkirri** nganta.
 NAME NF go **river-ALL** DOUBT
 "Humbug went **to the river**, I think." (FM045.B SE12yr: Horse and cow story)

- (61) an det tu bin baldan **la ngawa.**
 and the two NF fall **PREP water**
 "And these two fell **into the water.**" (FHM167: KP12yr: Conversation)
- (62) *ngali* garra gu **riba** na.
 1DU.INC FUT go **river** DIS
 "You and I will go to the river now." (FM046.C: RR23yr: Conversation)
- (63) ... wen dei gon **Nijpurru-ngkirri** na.
 ... when 3PL.S go **Pigeon.Hole-ALL** DIS
 "... when they go **to Nijpurru.**" (FM048.A: EO46yr: Conversation)
- (64) i garra gu **langa Roper** barn-im ola ting-s *nyanuny.*
 3SG.S FUT go **PREP PLACE** burn-TRN all thing-PL 3SG.DAT
 "She got to go **to Roper** and burn all of the stuff for him."
 (FM035.B: CR54yr: Conversation)
- (65) wi=rra gon na motika-ngka **Jetlmen.**
 1PL.S=FUT go DIS car-LOC **Kalkaringi**
 "We'll go in the car **to Kalkaringi.**" (FM027.B: CE25yr: Conversation)

A1.6.3.1.5 Ablative marker vs preposition

Gurindji Kriol has only one ablative marker, *-nginyi*. It is derived from Gurindji from what McConvell (1996) describes as a "source" suffix. However Nordlinger (1990, p. 23) describes the same form in Bilinarra, a neighbouring Ngumpin language, as an ablative marker. The Gurindji ablative marker *-ngurlu* is not used in Gurindji Kriol. In any case, *-nginyi* is the only form which is used as the ablative in Gurindji Kriol.

Figure 21 Allomorphic changes in the ablative case marker in Gurindji and Gurindji Kriol

	GURINDJI	GURINDJI KRIOL
ALL ENVIRONMENTS	<i>-ngurlu*</i> (ablative) <i>-nginyi#</i> (source)	<i>-nginyi</i> (ablative and source)

* (McConvell, 1996, p. 38-39)

described in McConvell, 1996, p. 46 as a source morpheme, but identified in Bilinarra grammar (Nordlinger, 1990, p. 23) as an ablative marker.

The ablative marker has three functions in Gurindji Kriol. It marks the physical or temporal starting point of a trajectory, or the source of an action. It has a more idiosyncratic use on agent to create a wound reference. It is also used on coverbs to indicate a previous state, and finally it is use on the agent adjunct of passive clauses.

Figure 22 Functions of ablative marker in Gurindji and Gurindji Kriol

	GURINDJI	KRIOL	GURINDJI KRIOL
SOURCE (PLACE, TIME)	ablative marker <i>-ngurlu, -nginyi</i>	preposition <i>brom</i>	<i>-nginyi</i> <i>brom</i>
WOUND REFERENCE AFTER EVENT	ablative marker <i>-nginyi</i> ablative marker <i>-ngurlu, -nginyi</i>	- preposition <i>brom</i>	<i>-nginyi</i> <i>-nginyi</i> <i>brom</i>
AGENT IN PASSIVE CLAUSE	no passive exists in Gurindji	<i>brom</i>	<i>-nginyi</i> <i>brom</i>

*indicates most commonly used form

The most common function of the ablative marker is to indicate the source of a physical or temporal change. For example, in (66), the act of *looking* occurs from a window. *Window* is marked with the ablative marker. Like the other case suffixes, the ablative alternates with a Kriol preposition, in this case, *brom* (<from) (67), and is also found in double-marked constructions (68).

- (66) *karu-ngku i=m karrap im window-nginyi too kankula-ngka.*
 child-ERG 3SG.S=NF look.at 3SG.Owindow-ABL too up-LOC
 "The child is up there looking at him **from the window.**"
 (FHM144: LS20yr: Frog story)

(67) *nyila-ngku warlaku-ngku i=m karrap-karra nyila bi*
 that-ERG dog-ERG 3SG=NF look.at-CONT that bee.hive

i=m jak brom karnti.
 3SG.S=NF fall from tree

"The dog looks at the beehive which falls **from the tree**."

(FHM162: RX15yr: Frog story)

(68) *Shadow bin jak det ngarlu, brom det karnti-nginyi.*
 NAME NF make.fall the honey, PREP the tree-ABL

"Shadow made the hive fall **from the tree**." (FM052.B: SS18yr: Frog story)

Ablative markers are also found on demonstratives, (69). In this construction they mark a previous time, which translates as "after that". The Kriol equivalent is "abta det", (70).

(69) *nyila-nginyi dei bin jejim-bat na*
that-ABL 3PL.S NF chase-TRN-CONT DIS
 "After that they chased it now." (FM009.A: RR23yr: Bird story)

(70) *abta det i bin kutij nyantu-rayinyj.*
after that 3SG.S NF stand 3SG-ALONE
 "After that, she stood alone." (FHM101: TA12yr: Locative pictures)

Another use of the ablative on a nominal is idiosyncratic. It creates a noun from a clause by attaching to the subject of the clause. For example in (71), *-nginyi* attaches to *jinek* (snake) to create a new noun "the result of the action of a snake biting" or "snake bite". McConvell (per. comm.) says this construction also exists in Gurindji, usually in relation to wounds and the agent.

(71) *luk-at-karra det jinek-nginyi wen i=m bait-im.*
 look-at-CONT the snake-ABL when 3SG.NF bite-TRN
 "(He was) looking at the **snake bite** where he was bitten."
 (FM032.B: CA19yr: Hunting story)

Like the other case markers, ablative markers are also found on verbs in Gurindji Kriol. Here they function to indicate a past event. For example, the ablative marker on *pangkily* (hit on head) in (72) marks the event of being hit on the head as happening prior to the

current action of "being" (which is not marked by a verb in Gurindji Kriol but realised as a verbless clause). This function is derived from Gurindji.

- (72) *marluka nyawa pangkily-nginyi wumara-ngku.*
 old.man this hit.head-ABL rock-ERG
 "The old man is there **after being hit on the head** by a rock."
 (FHM124: RS20yr: Locative pictures)

The final use of the ablative marker and preposition is in passive clauses. Passive clauses are described in §A1.14.2.7.

A1.6.3.2 Other nominal morphology

Gurindji Kriol also has an extensive inventory of other nominal morphology. Most of these morphemes are derivational: case morphology usually follows these morphemes, they do not form paradigms and they often change the word class of the nominal they attach to.

Much of this morphology is derived from Gurindji with only some changes to the phonology and function of the form. In many cases, the Gurindji suffix also has an equivalent Kriol free form from a different word class. For the purposes of comparison this section will deal with the Gurindji and Kriol-derived forms together. In this respect though this section takes Gurindji nominal morphology as a starting point, it is mostly concerned with forms (free or bound) which occur in the same functional domain.

A1.6.3.2.1 Plural: *-rrat*

This suffix is derived from the Gurindji morpheme *-rra* which modifies deonstratives (McConvell, 1996, p. 41), and there is no Kriol equivalent, though a plural determiner can fulfil this function §9. In Gurindji Kriol this suffix has inexplicably acquired a consonant and it is only found on demonstratives of Gurindji origin. It realises the meaning of plural, yet it must be noted that, like Gurindji, demonstratives without this

morpheme can also refer to more than one entity (McConvell, 1996, p. 41). An example is given in (73), where *nyila-rrat* refers to a group of wooden dolls.

- (73) *i=m nurt kuya wartarra nyila-rrat BS-tu*
 3SG.S=NF put.pressure thus goodness **that-PL** NAME-ERG
 "Oh Byron trod on **that lot** like this, goodness."
 (FM008.C: RR23yr: Conversation)

A1.6.3.2.2 Dual: *-kujarra, tu*

Gurindji has a dual suffix which is also used in Gurindji Kriol. In Gurindji this suffix also exists as a free form. However it is more commonly found as a bound morpheme in Gurindji Kriol. It is likely that it was in the process of grammaticalising as a suffix in Gurindji when McConvell (1996, p. 42) described it. The parallel Kriol form is a free numeral, *tu* (two).

- (74) *karu-kujarra warrkap-karra la shop.*
child-DUAL dance-CONT PREP shop
 "The two kids are dancing at the shop." (FHM051: JV11yr: Locative pictures)

- (75) *tu karu bin warrkap la shop.*
two child NF dance PREP shop
 "The two kids danced at the shop." (FHM084: BR11yr: Locative pictures)

A1.6.3.2.3 Paucal: *-walija*

Another number marker in Gurindji Kriol is the paucal, *-walija*, which is derived from the same form in Gurindji (McConvell, 1996, p. 41). The Kriol equivalent *-mob* is restricted to human stems in Gurindji Kriol (§A1.6.3.2.4). As in Gurindji, this suffix is used to refer to groups of usually animate nouns, for example "children" (76). Note that the *-rra* form here is not *-rrat* because the speaker is slightly older and also a Gurindji speaker.

- (76) *dei karan-karra karu-walija-ngku-ma ngakparn-ku nyawa-rra-ma*
 3PL.S scratch-CONT **child-PAUC-ERG-DIS** frog-DAT this-PL-DIS
 "This group of kids are digging for frogs." (FM047.C: EO46yr: Conversation)

A1.6.3.2.4 Associative plural: *-purrupurru*, *-nyarrara*, *-nganyjuk*, *-mob*

There are a number of group markers in Gurindji Kriol. Three come from Gurindji and one from Kriol. The first two are Gurindji suffixes, *-purrupurru* and *-nyarrara* have an associative meaning which roughly translates as "and such like" or "etc" (McConvell, 1996, p. 41). For example in (77), JO's grandmother tells him where to find some groceries. JO isn't clear what she wants to do (e.g. damper making, tea boiling) and therefore what ingredients she is after, and so he replies *ngapulu-purrupurru* (milk and other things that go with tea making).

- (77) MJ: *kurlarra kuya storeroom-ta na wat rong?*
 east thus store.room-LOC DIS what wrong?
 "That way east in the store room now what's wrong?"
- JO: *ngapulu-purrupurru wayi?*
milk-GROUP TAG?
 "You mean **milk and the like** (other things that go with tea)?"
 (FM027.A: MJ63yr, JS3yr: Conversation)

-nyarrara has a similar function in Gurindji Kriol. It also finds its origins in Gurindji (McConvell per. comm.).

- (78) *weya ngakparn-nyarrara nyila-rra.*
 where **frog-GROUP** that-PL
 "Where's **the toy frogs and other animals**?" (FM044.B: CR54yr: Conversation)

-nganyjuk is used to associate a group of animates with the stem it attaches to. It comes from the Gurindji *-ngunyju* and, like the plural suffix *-rrat*, has acquired a final consonant. A similar suffix from Kriol is also used, *-mob* which is more commonly used on human stems.

- (79) yu kan luk ola ting *tanyan* an *luwarra-nganyjuk*
 2SG can look all thing fish.species and **rifle.fish-GROUP**
 "You can see all of the **tanyan** and **a group of riflefish**."
 (FM041.C: CA19yr: Conversation)
- (80) dei bin gu *tarukap* na **Kalisha-mob-ma**.
 3PL.S NF go bathe DIS **NAME-GROUP-DIS**
 "They went swimming, **Kalisha and her friends**."
 (FM032.A: CA19yr: Conversation)

A1.6.3.2.5 Another: *-kari, najan, najan-kari*

The Gurindji *-kari* morpheme (81) and Kriol free morpheme *najan* (82) are forms in Gurindji Kriol which refer to an entity in relation to another entity. *Najan* is more commonly found than *-kari*, and may also be a head in a noun phrase, as in (83), where *najan* receives case-marking. They roughly translate as "another". Interestingly the most common realisation of this meaning is a compound *najan-kari* which is a NP head rather than a modifier (84). This is an innovative morphological outcome of language mixing which is not observed with any other nominal morphemes.

- (81) ... wen i=m tok-in bo det *karu langa-kari-ngka*
 ... when 3SG.S=NF tok-CONT PREP the child **ear-OTHER-LOC**
 "(That women) when she's speaking in the child's **other ear**."
 (FHM015: SS18yr: Dative pictures)
- (82) **najan warlaku makin tebul-ta kanyjurra.**
another dog sleep table-LOC down
 "**Another dog** sleeps underneath the table."
 (FHM027: CA19yr: Locative pictures)
- (83) oh **najan-tu** baldan binij *karnti-ngka* baldan
 oh **another-ERG** fall finish tree-LOC fall
 "Oh **another one** falls over, that's it over a log he falls."
 (FM046.B: RR23yr: Bird story)
- (84) an **najan-kari** i=m wok *nyawa-ngka.*
 and **another-OTHER** 3SG.S=NF work this-LOC
 "And **another** one works here." (FM038.C: EO46yr: Conversation)

A1.6.3.2.6 Proprietary: *-yawung, garram, gat*

Both the Gurindji *-yawung* suffix, (85) and (87), and the Kriol *garram* and *gat* (<got) preposition (86) and (88) are used in Gurindji Kriol to express a comitative and instrumental meaning, and are roughly equivalent to the English *with* or *having*. The Gurindji suffix is used more commonly than the Kriol morpheme, and double-marking is not found. This suffix also has an allomorph *-jawung* which is used on consonant-final stems. The comitative use has an accompaniment meaning. For example in (85) and (86), the boy is accompanied by his pet dog. It is also used to indicate that an object is an instrument through which an action is performed. In Gurindji the proprietary is coupled with an ergative marker when it functions as an instrument (McConvell, 1996, p. 45), however in Gurindji Kriol the proprietary alone expresses this function.

(85) *jintaku karu i=m pleibat-karra warlaku-yawung.*
 one child 3SG.S=NF play-CONT **dog-PROP**
 "One child, he's playing **with a dog**." (FHM014: CE25yr: Monster story)

(86) *det karu i=m pleibat gat warlaku.*
 the child 3SG.S=NF play **have dog**
 "The child is playing **with the dog**." (FHM066: LS20yr: Monster story)

(87) *marluka-ma dei bin kil-im pangkily kurrupartu-yawung.*
 old.man-DIS 3PL.S NF hit-TRN hit.head **boomerang-PROP**
 "The old man, they hit on the head **with a boomerang**."
 (FHM061: RR23yr: Ergative pictures)

(88) *dei=m kil-im wan marluka gat kurrupartu.*
 3PL.S=NF hit-TRN one old.man **with boomerang**
 "They hit one old man **with a boomerang**."
 (FHM083: JA39yr: Ergative pictures)

A more idiomatic use of the proprietary marker is in insult creation. Two of the most commonly heard insults are built from a body part stem and a proprietary suffix.

A1.6.3.2.8 Comparative: *-marraj*, *laik*

The Gurindji comparative suffix *-marraj* (93) and the Kriol equivalent *laik* (<like) (94) are both used in Gurindji Kriol. They appear to be used relatively equally and it is not clear which environments may trigger the use of one or the other. They are only found on nouns and emphatic pronouns.

- (93) Leyton *jikirrij-marraj* deya *kartpi* i garram.
 NAME **willy.wagtail-COMP** there hair 3SG.S have
 "Leyton's got his hair sticking up **like a willy wagtail!**"
 (FM049.B: AR19yr: Conversation)

- (94) **laik** *nyuntu* i bin jidan i bin top kwait-bala.
like 2SG 3SG.S NF sit 3SG.S NF be quiet-NMZ
 "Like you, he was sitting down quietly."
 (FM047.C: EO46yr: Conversation)

A1.6.3.2.9 Inchoative: *-k*, *-pijik*

The meaning associated with the Gurindji-derived inchoative morphemes *-k* and *-pijik* is either causal or they indicate a change of state. They can also attach to a noun, or verb to create a reduced subordinate clause. For example, in (95), the inchoative is attached to a noun *ngawa* (water) which expresses the end state of the verb *meltim* (melt). When the inchoative attaches to a verb it has a causal meaning. In (96), the inchoative attaches to the verb *lungkarra* (cry) to indicate that the agent, the prickle, made the object, a boy, cry.

- (95) *wulngarn-tu* i=m melt-im-at ais *ngawa-pijik*.
 sun-ERG 3SG.S=NF melt-TRN-out ice **water-INCHO**
 "The sun, it melts the ice, and **turns it into water.**"
 (FHM057: LE18yr: Ergative pictures)

- (96) *karnti-ngku* *turp* im fut-*ta* *lungkarra-k*
 tree-ERG poke 3SG.O foot-LOC **cry-INCHO**
 "The stick went through his foot, and **made him cry.**"
 (FM045.D: CE25yr: Bird story)

A1.6.3.2.10 Nominaliser: *-ny*, *-wan*, *-bala*

A number of nominalisers are used in Gurindji Kriol. These suffixes derive nouns from other nominals. The *-ny* morpheme is derived from Gurindji and has a very restrictive use, attaching to one Gurindji-derived adverbial demonstrative *kuya* (thus) to mean "that one", as is exemplified in (97). This new word form is equivalent to *nyila* and *darran* (that one). The restricted use of *-ny* suggests that it is no longer productive. The Kriol *-wan* (<one) and *-bala* (<fellow) are found more commonly in Gurindji Kriol. These morphemes create a nominal from an adjective which may act as a modifier or the head of a noun phrase. They are described briefly in §A1.7.

- (97) *paka-ngku* *turrrp nyantu* *kuya-ny-ta*.
 prickle-ERG poke 3SG thus-NMZ-LOC
 "The prickle poked him through **that one**." (FM046.B: RR23yr: Bird story)

A1.6.3.2.11 Agentive: *-kaji*

The agentive suffix is derived from Gurindji. Its vowel-final stem variant *-waji* (McConvell, 1996, p. 50) is only rarely used now. This suffix is a very productive derivational morpheme which can be used to create words which describe introduced objects from European culture. Most often the word created from the agentive suffix is eventually replaced with a European borrowing. The created noun can also be used to refer to something that a speaker cannot remember the name of at that moment, but can, for example, remember its function. This suffix can create nouns from verbs, (98), and nouns from nouns (99).

(98)

<i>toktok-kaji</i>	<i>pleibat-kaji</i>	<i>jakurl-kaji</i>	<i>nang-kaji</i>	<i>makin-kaji</i>
talk-AGENT	play-AGENT	cover-AGENT	stick-AGENT	sleep-AGENT
Recorder	Pre-school age child	Nappy/Diaper	Sticker	Bed

(99)

<i>langa-kaji</i> ear-AGENT Otoscope	<i>mok-kaji</i> smoke-AGENT Cigarette lighter	<i>langgij-kaji</i> language-AGENT Linguist
<i>headache-kaji</i> headache-AGENT Noisy insect	<i>Coke-kaji</i> coke-AGENT Coke drinker	<i>bip-kaji</i> meat-AGENT Kalkaringi meat truck

A1.6.3.2.12 Alone: *-rayinyj*

The form of the "alone" suffix in Gurindji Kriol is derived from the Gurindji *-wariny* or *-warij* (McConvell, 1996, p. 54). Like Gurindji, the only roots it attaches to in Gurindji Kriol are emphatic pronouns. For example, in (100), the *-rayinyj* is suffixed to the third person emphatic pronoun, to produce the meaning "on his own".

- (100) *marluka* i=m jidan *nyantu-rayinyj*.
 old.man 3SG.S=NF sit 3SG-ALONE
 "The old man sits down **on his own**." (FHM066: LS20yr: Locative pictures)

A1.6.3.3 Nominal morphology affecting information structure

The information structure of a Gurindji Kriol utterance is affected by a number of choices relating to word order and morphology. This section describes a group of morphemes which contribute to the prominence and intended interpretation of clause information. A number of these markers are derived from Gurindji, and the use of the ergative marker also plays a role in structuring information (see §9). However the Kriol focus marker, *na* (<now) is the most dominant of this group of suffixes.

A1.6.3.3.1 Only: *-rni, rait*

The Gurindji-derived suffix *-rni* is used on both nouns and verbs. It is glossed as "only", though it has a range of meanings which do not correspond well with any English equivalent. McConvell (1983) suggests that *-rni* has a range of meanings including

"only". "precisely", "even", "already", "really" and "still". These meanings may be reduced to two categories - a non-temporal use which reduces a range of possibilities to just one, e.g. "precisely" and "only", and a temporal meaning of "still" and "all the time". In Gurindji Kriol, *-rni* is only used in the non-temporal sense. When it is used on nouns, it alternates with the Kriol *rait*. (101) and (102) are parallel constructions where the Gurindji suffix is used in the first and the Kriol free morpheme in the second. If the Kriol *rait* is used it must be accompanied by the Kriol preposition not the Gurindji locative (102). This restriction may suggest that these constructions are code-switched Gurindji-Kriol utterances rather than structures available in Gurindji Kriol.

(101) *paka* bin *turp* im **leg-ta-rni**.
 prickle NF poke 3SG.O **leg-LOC-ONLY**
 "The prickle went **right through his leg**." (FM011.A: SS18yr: Bird story)

(102) *jinek-kulu* im=in bait-im **rait la leg**.
 snake-ERG 3SG.S=NF bite-TRN **right PREP leg**.
 "The snake bit him **right on the leg**." (FM030.B: CR54yr: Locative pictures)

The "only" suffix may also be used on verbs in Gurindji Kriol. In these cases, it has a non-temporal meaning which translates as "really" or "very".

(103) an i bin *teik*-im na **yamak-pa-rni**.
 and 3SG.S NF take-TRN DIS **quiet-PA-ONLY**
 "And it took him **really quietly**." (FHM054: AC11yr: Guitar story)

A1.6.3.3.2 *na, -na*

na is derived from Kriol, and originally from the English word *now*. Munro (2005) transcribes it as a suffix rather than a free morpheme. Actually it seems to possess clitic-like qualities in its phonological invariability and its ability to attach to different word classes and to the edge of an intonational phrase. I keep with traditional Kriol orthography found in Sandefur (1979), for example, and transcribe it as a free morpheme. However this is not meant as an analysis of its morphological status.

Although *na* originates in Kriol, it is a well-established borrowing in Gurindji and other Victoria River District languages, including Jaminjung (Schultze-Berndt, submitted). In this respect the use of *na* in Gurindji predates the emergence of the mixed language. In these VRD languages, including Gurindji Kriol, *na* functions in the same way as in Kriol.

Generally speaking, *na* is used to accord prominence to the element it follows. Graber (1987) documents this emphatic use of *na* in Kriol in conjunction with a number of sentential elements, including noun phrases and intonational units. When *na* combines with a noun phrase it often functions contrastively. *na* is used in Gurindji Kriol in much the same manner as Kriol. Charola (2002, p. 33) suggests that it has supplanted the Gurindji focus marker (§A1.6.3.3.4). For example (104) is a part of a series of picture elicitations. The previous picture showed a picture of a child throwing a rock into a house. The next picture shows a child throwing a rock into water. CA describes this picture using *na* following the NP *ngawa-ngka* (water-LOC). *na* is used to contrast the goals in both utterances.

- (104) det seim *karu-ngku tawirrijip* wumara *ngawa-ngka*
 the same child-ERG shoot.rocks rock water-LOC

na wumara.

DIS rock

"The same kid shoots rocks into the water **now**."

(FHM123: CA19yr: Allative pictures)

When *na* is used at the end of an intonational phrase, it adds prominence to the whole phrase. For example, in (105) LE finishes the phrase "the beehive fell down" with *na*, and *binij* (<finish "that's it"), thereby emphasizing the whole unit.

- (105) det warlaku bin *karrap* kuya det bi bin baldan **na**,
 the dog NF look.at thus the bee NF fall **DIS**

binij *ngarlu-waji*.

finish bee-AGENT

"The dog was looking like that at the beehive and it fell down **now**, that's it."

(FHM157: LE18yr: Frog story)

A1.6.3.3.3 *-ma*.

-ma is a Gurindji topic marker, according to McConvell's analysis. It is positioned after derivational morphology and case marking, as in (106). It is used in Gurindji Kriol, though not to the same extent as Gurindji. One use which remains strong is demonstrated in (107). Here it attaches to the Gurindji demonstrative and marks the beginning of a new narrative, or topic change.

- (106) *warlaku-ngku-ma* i bin *ngalyak* im.
dog-ERG-DIS 3SG.S NF lick 3SG.O
 "The dog licked him." (FHM168: CE25yr: Hunting story)

- (107) *nyawa-ma ngantipa* juk-im-bat wumara kuya.
this-DIS 1PLINC throw-TRN-CONT rock thus
 "And now, we throw the rocks like that." (FM048.A: EO46yr: Conversation)

A1.6.3.3.4 *-rla*.

-rla is a phonologically reduced form of the Gurindji *-warla* and *-parla*. McConvell (per. comm.) describes *-warla* and *-parla* as focus markers in Gurindji, also with a now/then temporal functions, as in *-rni* (A1.6.3.3.1). Little has been described about their use in Gurindji. It is not clear what range of stems it can attach to, in terms of parts of speech. A reduced form and function of this marker exists in Gurindji Kriol. *-rla* only attaches to Kriol demonstratives, particularly *hiya* (here) and has an emphatic meaning in this context. For example, in (108), AR is trying to get the attention of her son BS in order to make him do a task. The use of *-rla* on *hiya* emphasises the location where AR is trying to direct his attention.

- (108) yu luk **hiya-rla**, BS yu luk hiya *ngayu-ngku*
 2SG look **here-FOC**, NAME 2SG look here 1SG-ERG
 put-im *partartaj*.
 put -TRN stand.up.REDUP
 "You look **here**. BS you look here, I'm making it stand up."
 (FM013.B: AR19yr: Conversation)

A1.6.3.3.5 Ergative marker

Finally, the ergative marker has developed information structure properties which it does not possess in Gurindji. It is used to highlight the agency of the subject of a transitive and intransitive clause. More information can be found in §9.6.

A1.7 Adjectives

Although *adjectives* are not generally morphologically or syntactically distinctive from other nominals in many Australian languages (see for e.g. Dyirbal: Dixon, 1982, p. 45), a subclass of adjective has emerged in Gurindji Kriol. Syntactically, adjectives cannot occur predicatively, but modify the head of a noun phrase and usually precede this noun.

- (109) *kamel-tu i bin ngalyakap im yapakayi kengkaru.*
 camel-ERG 3SG.S NF lick 3SG.O **small** kangaroo
 "The camel licked the **small** kangaroo." (FHM104: AR19yr: Ergative pictures)

In order to head a NP, adjectives are first nominalised with a Kriol nominaliser suffix -*wan* (<one) (see §A1.6.3.2.10). Nominalised adjectives pattern with nominals, taking case marking, for example.

- (110) *i=m kiyap la im nyanuny kapuku-yu na*
 3SG.S=NF whisper PREP 3SG.O 3SG.DAT sister-DAT DIS
jangkarni-wan-tu.
big-NOM-ERG
 "She whispered to her sister, **the older one.**" (FHM100: SS18yr: Dative pictures)

A1.8 Pronouns

In Gurindji Kriol, two pronominal subclasses constitute the pronoun paradigm: (a) pronouns which are derived from Kriol, and (b) emphatic pronouns which are Gurindji in origin. These two subclasses can be distinguished on the basis of morphology. Emphatic

pronouns act as the head of a noun phrase and therefore can be case-marked. In this respect they are really a subclass of nominals. Regular pronouns can receive tense clitics (§A1.11.2). For example in (111) the emphatic pronoun is ergatively marked and is cross-referenced by a regular pronoun which receives a future marker =*rra* (the clitic form of *garra*). Note that the pronoun *ai* is not necessarily present, and the distinction between constructions is not clear. This is something I leave for future work.

- (111) an *ngayu-ngku* **ai=rra** luk-abta im wayi.
 and 1SG-ERG 1SG.S=FUT look-after 3SG.O TAG
 "And me, I've got to look after him, don't I." (FM041.A: AC11yr: Conversation)

Syntactically these pronouns may also be differentiated. Regular pronouns can combine with the Kriol oblique proclitic (§A1.12) to form dative objects, such as in (112) (a). Emphatic pronouns cannot be used in this frame (b), requiring a dative form (c) or dative preposition instead (d).

(112) "Talk to me"

- | | | | |
|-----|------------------------------------|-----|--|
| (a) | tok la=mi
talk OBL=1SG | (b) | *tok la= <i>ngayu</i>
*talk OBL=1SG |
| (c) | tok <i>ngayiny</i>
talk 1SG.DAT | (d) | tok bo <i>ngayu</i>
talk PREP 1SG |

The pronominal paradigms are represented in Figure 23. Pronouns distinguish person (1st, 2nd and 3rd) and number (singular, dual and plural), and further distinguish 1st person pronouns as inclusive (including hearer), or exclusive (excluding hearer), though syncretism exists between regular pronoun ex/inclusive forms. The pronoun series also distinguishes three core cases - ergative, nominative and accusative. In the regular pronoun declension, syncretism exists between the ergative and nominative forms, and in the nominative and accusative emphatic pronoun forms are syncretised. A general reflexive/reciprocal pronoun is derived from the Kriol reflexive pronoun.

Figure 23 Gurindji Kriol Pronominal Declension

	Reg. ERG	Reg. NOM	Reg. ACC	Emph. ERG	Emph. NOM	Emph. ACC	Dative
1SG	ai	ai	mi	<i>ngayu-ngku</i>	<i>ngayu</i>	<i>ngayu</i>	<i>ngayiny</i>
1SGINC	wi*	wi*	as*	<i>ngali-ngku</i>	<i>ngali</i>	<i>ngali</i>	<i>ngaliwuny*</i>
1SGEX	wi	wi	as*	<i>ngantipa-ngku</i>	<i>ngantipa</i>	<i>ngantipa</i>	<i>ngantipany</i>
1PLINC	wi*	wi*	as*	-	-	-	-
2SG	yu	yu	yu	<i>nyuntu-ngku</i>	<i>nyuntu</i>	<i>nyuntu</i>	<i>nyununy</i>
2DU	yutu(bala)	yutu(bala)	yutu(bala)	-	-	-	-
2PL	yumob	yumob	yumob	<i>nyurrulu-ngku</i>	<i>nyurru(lu)</i>	<i>nyurru(lu)</i>	<i>nyurruluny</i>
3SG	i	i	im	<i>nyantu-ngku</i>	<i>nyantu</i>	<i>nyantu</i>	<i>nyanuny</i>
3DU	tu(bala)	tu(bala)	tu(bala)	-	-	-	-
3PL	dei	dei	dem	<i>nyarrulu-ngku</i>	<i>nyarru(lu)</i>	<i>nyarru(lu)</i>	<i>nyarruluny</i>
REFLX			mijelp				

* unattested in data, therefore more work required here.

Though the regular pronouns in Kriol (and their equivalent bound forms in Gurindji) distinguish inclusive and exclusive in 1st person declension, they do not in Gurindji Kriol. This lack of distinction may be an English influence or it may be because the exclusive distinction can be expressed by the emphatic pronoun *ngantipa*. The 1st person dual regular pronouns are also absent in Gurindji Kriol. This distinction is not made in the emphatic pronouns.

Figure 24 Regular pronouns in Kriol and Gurindji Kriol

	Ergative and Nominative		Accusative	
	Kriol*	Gurindji Kriol	Kriol*	Gurindji Kriol
1SG	ai/mi	ai	mi	mi
1DUINC	yunmi	-	yunmi	-
1DUEX	mindubala	-	mindubala	-
1PLEX	mibala	wi	mibala	as*
1PLINC	wi	wi*	as	as*
2SG	yu	yu	yu	yu
2DU	yundubala	yutu(bala)	yundubala	yutu(bala)
2PL	yu	yumob	yu	yumob
3SG	im	i	im	im
3DU	dubala	tu(bala)	dubala	tu(bala)
3PL	olabat/dei	dei	dem	dem
REFLX			mijelp	mijelp

* based on Sandefur, 1979, p. 85-89

Emphatic pronouns are derived from Gurindji and are syntactically and morphologically classified as nominals. For example, they can act as the head of a noun phrase and can be case-marked (which differs from Gurindji). However they form a closed set of forms which align closely with the regular pronoun paradigm, hence their inclusion in this section. The Gurindji Kriol emphatic pronouns distinguish person (1st, 2nd, 3rd), number (singular and plural) and case (ergative, dative and nominative/accusative). Note though that the ergative marker is optional, as shown below with brackets. The Gurindji Kriol paradigm almost mirrors the Gurindji forms. However, where Gurindji shows syncretism between ergative, nominative and accusative forms, Gurindji Kriol has a separate ergative form. Other notable differences are the lack of dual forms, and in/exclusive forms in the 1st person plural category.

Figure 25 Emphatic pronouns in Gurindji and Gurindji Kriol (partially repeated from Figure 23)

	ERG, NOM, ACC Gurindji*	ERG Gurindji Kriol	NOM and ACC Gurindji Kriol	Dative Gurindji*	Dative Gurindji Kriol
1SGEX	<i>ngayu</i>	<i>ngayu(-ngku)</i>	<i>ngayu</i>	<i>ngayiny</i>	<i>ngayiny</i>
1SGINC	<i>ngali</i>	<i>ngali(-ngku)</i>	<i>ngali</i>	<i>ngalinguny</i>	<i>ngaliwuny</i>
1DUINC	<i>ngaliwula</i>	-	-	<i>ngaliwulany</i>	-
1DUEX	<i>ngayirra</i>	-	-	<i>ngayirranany</i>	-
1PLEX	<i>ngantipa</i>	<i>ngantipa(-ngku)</i>	<i>ngantipa</i>	<i>ngantipany</i>	<i>ngantipany</i>
1PLINC	<i>ngaliwa</i>	-	-	<i>ngaliwany</i>	-
2SG	<i>nyuntu</i>	<i>nyuntu(-ngku)</i>	<i>nyuntu</i>	<i>nyununy</i>	<i>nyununy</i>
2DU	<i>nyunpula</i>	-	-	-	-
2PL	<i>nyurrulu</i>	<i>nyurrulu(-ngku)</i>	<i>nyurru(lu)</i>	<i>nyurruluny</i>	<i>nyurruluny</i>
3SG	<i>nyantu</i>	<i>nyantu(-ngku)</i>	<i>nyantu</i>	<i>nyanuny</i>	<i>nyanuny</i>
3DU	<i>nyanpula</i>	-	-	-	-
3PL	<i>nyarrulu</i>	<i>nyarrulu(-ngku)</i>	<i>nyarru(lu)</i>	<i>nyarruluny</i>	<i>nyarraluny</i>

* based on McConvell, 1996, p. 55

Functionally the regular pronouns and emphatic pronouns in Gurindji Kriol can both act as arguments of a verb, as is shown in (113). Here *yu* (you) is the subject of *talim* (tell) and *nyantu*, the object of this verb.

- (113) *yu kaan tal-im nyantu.*
 2SG NEG tell-TRN 3SG
 "You can't say it to her." (FHM001: AC11yr: Conversation)

However the status of the regular pronouns as arguments is questionable. Their status can be set within the larger debate in Australian languages concerning the argument status of bound coreferential pronoun clitics (see for eg Austin & Bresnan, 1996; Evans, 2002; Jelinek, 1984). In a sense the Gurindji Kriol pronoun system functions to a certain extent as the Gurindji system does. The set of regular pronouns behave in much the same manner as Gurindji pronoun clitics (§A1.2.1), in that they cross-reference nominal arguments such as emphatic pronouns (114) and nouns (115). Emphatic pronouns and nominals can be omitted, making the regular pronouns arguments in these situations.

- (114) an *ngantipa-ngku* **wi** tok bo *ngantipany* *karu* na.
 and 1PLEX-ERG 3PL.S talk PREP 1PLEX.DAT child DIS
 "And us, we talk to our kids now." (FM060.B: VB20yr: Conversation)
- (115) *nyila-nginyi* **det** *karu-ngku* **ii=m** *tawirrijip* **det** *kajirri*
 this-ABL **the** **child-ERG** 3SG.S=NF shoot.rock the old.woman
 makin-ta.
 sleep-LOC
 "After that, **it is the kid** who throws rocks at the old lady who's sleeping there."

In these examples, the regular pronouns may be considered arguments with the nominals as dislocated elements. Alternatively, the emphatic pronouns may be analysed as the arguments and the regular pronouns either co-construct the arguments or do not have argument status at all. However there are a number of problems with all of these analyses, and also in comparing these Gurindji Kriol constructions with equivalent Gurindji constructions. In §4, I will discuss this issue in more detail.

The function of the emphatic pronoun is to add prominence to the entity it refers to. The dative set of emphatic pronouns has a similar range of functions to dative nominals (§A1.6.3.1.2). They can be used to mark an indirect object (116), and function in possessive constructions (117) and benefactive constructions (118). For more information about possessive constructions, see §6.

- (116) *dei* *neba* tok *ngayiny* *dei* *bin* *jas* tok "ai=m *gon* *bijin*".
 3PL.S NEG talk 1SG.DAT 3PL.S NF just talk "1SG.S=NF go fishing
 "They didn't say anything **to me**, they just said they were going fishing."
 (FM048.A: CA19yr: Conversation)
- (117) *warta* *ngayiny* *warlaku* *munpa* *bin* *jawurra* *im*.
 goodness 1SG.DAT **dog** monster NF steal 3SG.O.
 "Goodness **my dog**, the monster stole him." (FM017.D: SS18yr: Monster story)
- (118) *Mummy* *du-im* *ngayiny* *kuya-ny*.
 mother do-TRN 1SG.DAT thus-NMZ
 "Mummy do this one **for me**." (FM037.C: KW4yr: Conversation)

A1.9 Demonstratives

The Gurindji Kriol demonstrative system is similar to the pronoun system in that both sets of Gurindji and Kriol demonstratives co-exist. However unlike the pronoun system the interaction of the Kriol and Gurindji demonstratives is less clear. Where Kriol and Gurindji-derived pronouns exist in functional and syntactic complementary distribution, much more overlap can be observed in the demonstrative system. It seems likely that these two systems have not yet converged in a stable fashion.

The demonstratives generally behave both morphologically and syntactically as they do in their source languages. This distinction, however is becoming blurred as Kriol demonstratives are becoming subsumed into the Gurindji system, as will be shown later. Figure 26 maps out the demonstrative forms found in Gurindji Kriol.

Figure 26 Gurindji Kriol demonstratives

	PROXIMAL 'this'	DISTAL 'that'
ABSOLUTIVE	<i>nyawa</i>	<i>nyila</i>
ERGATIVE	<i>nyawa-ngku</i>	<i>nyila-ngku</i>
DATIVE	<i>nyawa-wu, *bo nyawa</i>	<i>nyila-wu, *bo nyila</i>
LOCATIVE	<i>nyawa-ngka, *hiya, hiya-ngka</i>	<i>nyila-ngka, *deya, deya-ngka</i>
ALLATIVE	<i>dijei</i>	<i>darrei</i>
ABLATIVE	<i>brom hiya</i>	<i>nyila-nginyi¹, brom deya</i>

* indicates most common form

¹ This form is only used in reference to time, not space (trans. "after that")

First, inflected demonstratives in Gurindji Kriol originate from Gurindji. They have regularised in form, as is demonstrated in Figure 27. The demonstratives now inflect the absolutive form *nyawa* and *nyila* instead of using the bound forms *murla-* and *yala-*.

Figure 27 Gurindji demonstratives (adapted from McConvell, 1996, p. 61)

	proximal "this" Gurindji	GK	distal "that" Gurindji	GK
ABSOLUTE	<i>nyawa</i>	<i>nyawa</i>	<i>nyila</i>	<i>nyila</i>
ERGATIVE	<i>murlungku</i>	<i>nyawa-ngku</i>	<i>yalangku</i>	<i>nyila-ngku</i>
DATIVE	<i>murluwu</i>	-	<i>yaluwu</i>	-
LOCATIVE	<i>murlungka</i>	<i>nyawa-ngka</i>	<i>yalangka</i>	<i>nyila-ngka</i>
ALLATIVE	<i>murlangkurra</i>	-	<i>yalangkurra</i>	-
ABLATIVE	<i>murlangurlu</i>	-	<i>yalangurlu</i>	<i>nyila-nginyi*</i>

* This form is only used in reference to time, not space (trans. "after that")

The Gurindji-derived demonstratives in Gurindji Kriol are basically a subclass of the nominals. They can modify the head of a NP or behave as the head of a NP. In these cases they inflect for case, as in (119). Where they inflect for local cases, they have an adverbial status. (120) is an example of this. These demonstratives may also inflect for number (121). This suffix is described in more detail in §A1.6.3.2.1.

(119) *nyawa-ngku* i mait bait-im *nyuntu*
this-ERG 3SG.S might bite-TRN 2SG
 "This one, it might bite you." (FM046.A RR23yr: Conversation)

(120) ai=rra put-im fij *nyawa-ngka*
 1SG.S=FUT put-TRN fish **this-LOC**
 "I'll put the fish here." (FM041.C: CA19yr: Conversation)

(121) dei bin *kayikayi ngayu dem karu-walija-ngku nyawa-rrat-tu.*
 3PL.S NF chase 1SG DET.PL child-PAUC-ERG **this-PL-ERG**
 "They chased me, **that mob** of kids." (FM046.B: RR23yr: Bird story)

A number of other demonstratives of Gurindji origin are found in Gurindji Kriol. The first is the uninflected form *nyanawu* which has a temporal and shared knowledge meaning. McConvell (1996, p. 61) translates this demonstrative as "that time which you and I share knowledge of". A more simple translation might be "you remember". (122) is an example of *nyanawu* from Gurindji Kriol which modifies the noun *kirri* (woman).

- (122) *nyanawu kirri dei bin bring-im im bihain wayi.*
remember woman 3PL.S NF bring-TRN 3SG.O behind TAG
 "You remember those woman, they used to bring it at the back didn't they."
 (FM060.B: VB20yr: Conversation)

The final demonstrative of Gurindji origin is an adverbial form *kuya* which means "thus" or "like this" (McConvell, 1996, p. 61). This adverbial demonstrative is prevalent, particularly in child-directed speech where children are being shown how to perform a task. For example in (123) a mother is telling her child to put some toys on the ground in a particular way so that he won't step on them. *kuya* does not inflect for case in Gurindji Kriol, though it does in Gurindji. In Gurindji Kriol it is only found with a nominaliser suffix which forms the noun "this one" (see §A1.6.3.2.10). Like adjectives, *kuya* may be found case-marked.

- (123) *yu put-im nyawa kuya so yu kaan nurt ...*
 2SG put-TRN this **thus** so 2SG NEG press
 "You put this one **like this** so you won't step on it ..."
 (FM008.C: RR23yr: Conversation)

The remaining demonstratives in Gurindji Kriol come from Kriol. The figure below compares Kriol forms with the forms used in Gurindji Kriol.

Figure 28 Kriol demonstratives (adapted from Munro 2004, p. 155-56)

	PROX "this"		DIST "that"	
	Kriol	GK	Kriol	GK
BASE	dijan	-	darran	-
DATIVE	bla dijan	-	bla darran	-
LOCATIVE	hiya	hiya	deya	deya
ALLATIVE	dije	dije	darrei	darrei
ABLATIVE	brom hiya	brom hiya	brom deya	brom deya

Kriol-based demonstratives in Gurindji Kriol act as adverbials or determiners. Firstly, these demonstratives are used adverbially to refer to spatial or temporal direction. An example of a spatial demonstrative is given in (124). Interestingly the locative forms, *hiya* (here) and *deya* (there), are increasingly found with Gurindji locative marking. (125)

is an example of this innovation. These demonstratives can also be inflected with a Gurindji focus marker, as in (126). This marker is described in §A1.6.3.3.4.

(124) yu put-im-bek **hiya** luk toktok-ku
 2SG put-TRN-back **here** look talk.REDUP-DAT
 "You put it back **here** look for us to talk about."
 (FM007.A: CE25yr: Conversation)

(125) an yu warrkap **hiya-ngka**.
 and 2SG dance **here-LOC**
 "And you dance **here**." (FM050.B: KO6yr: Conversation)

(126) yu kom **hiya-rla** kom-an kom-an
 2SG come **here-FOC** come-on come-on
 "You come **here**, come on come on." (FM047.A: SS18yr: Conversation)

Kriol also provides Gurindji Kriol with a set of determiners, as set out in Figure 29. As with the demonstratives in general, these determiners have separate forms for the position of the referent with respect to the speaker (proximal and distal), but additionally for number (unmarked and plural).

Figure 29 Gurindji Kriol determiners, adapted from Munro 2004, p. 111, Nicholls 2006

		UNMARKED	PLURAL
PROXIMAL		dij (<this)	dem (<non-SAE* them)
DISTAL	DEFINITE	det (<that)	detlot (<that lot)
	INDEFINITE	wan (<one)	

* SAE=Standard Australian English

Below are examples of the proximal and distal forms functioning as determiners in an NP.

(127) *wartiti kalyja na dij ngawa*
 poor.thing shallow DIS DET water
 "Oh dear, **this** water is shallow." (FM049.A: CR54yr: Conversation)

(128) *an i bin pangkily det ngarlaka wayi.*
 and 3SG.SNF hit.head **the** head TAG
 "And it hit **the** head, didn't it?" (FM041.A: AC11yr: Locative pictures)

Though plurality may be marked on the noun head, as in (129) (see also §A1.6.3.2.3), this feature may be marked by the determiner instead. For example, in (130) *ngakparn* (frog) is not marked for number, though a plural determiner is used to indicate that more than one frog is being referred to. The determiner in (129) is unmarked for number.

(129) *ai bikit to bring det hook-walija wartiti.*
 1SG.S forget to bring **the** hook-PAUC poor.thing
 "Whoops I forgot to bring **those/the hooks**." (FM041.C: CA19yr: Conversation)

(130) *deya na dem ngakparn yeah.*
 there DIS DET.PL **frog** yeah.
 "There are **those frogs**, yeah." (FM047.C: EO46yr: Conversation)

A1.10 Directionals

One of the more interesting features of Gurindji is its two absolute systems of spatial reference, based on river direction and cardinal points (Charola, 1999, p. 14-16). The extensive and highly inflected system has all but been lost in Gurindji Kriol. On occasion Gurindji Kriol speakers use cardinal directions when they are away from the community and in the surrounding country. These cardinal forms are mostly found uninflected. Generally speaking, the relative system of local demonstratives is the dominant way of referring to an entity's location in relation to another in Gurindji Kriol. The 'left' and 'right' system from English has not been adopted. It is not clear whether this system is used in Kriol.

- (131) FM *nyila* i=m gu ged-im *nyanuny* koldringk
 NAMEthat 3SG.S=NF go get-TRN 3SG.DAT soft.drink
- darrei *kaa-rni-rra*.
 that.way **east-up-ALL**
 "That FM is going that way, **towards the east**, to get her soft drink."
 (FM060.A: RS20yr: Conversation)

A1.11 Verbs

A1.11.1 Main verbs

The lexical category of verb consists of Kriol main verbs (Sandefur, 1979, p. 114) and Gurindji coverbs (McConvell, 1996, p. 66). This word class is defined by syntactic criteria rather than morphological criteria. Morphologically verbs behave differently in Gurindji Kriol depending on the source language of the verb, as will be described below. I will call this verb class, "main verbs" because it uses the same syntactic frame as the equivalent Kriol verbs.

Syntactically, main verbs combine with tense, aspect, mood and negation markers derived from Kriol to form a verb complex. In this way, verbs of Kriol or Gurindji origin are syntactically identical. For example, in (132) and (133) the Gurindji verb *katurl* and the Kriol verb *baitim* (bite) combine with a past tense morpheme.

- (132) *nyila-nginyi-ma jintaku marluka jinek bin katurl im wartan-ta*.
 that-ABL-DIS one old.man snake NF **bite** 3SG.Ohand-LOC
 "After that the snake **bit** the old man on the arm."
 (FHM026: TJ22yr: Locative pictures)
- (133) *marluka nganta jinek bin bait-im im jamana-ngka nganta*
 old.man DOUBT snakeNF **bite-TRN** 3SG.Ofoot-LOC DOUBT
 "It looks like the dog **bit** the old man on the leg."
 (FHM026: TJ22yr: Locative pictures)

Verbs of both Gurindji and Kriol origin can also combine with an auxiliary verb of Kriol origin. For example the auxiliary verb *gon* (go) is used in conjunction with the Gurindji verb *mingip* (crawl) in (134) and *lukaran* (search) in (135).

- (134) *nyila* bebi **gon** *mingip-karra* *kanyjupal* table-*ta*.
 that baby **go** **crawl-CONT** underneath table-LOC
 "That baby **goes crawling** underneath the table."
 (FHM029.A: TJ22yr: Locative pictures)

- (135) LD an WB an *nyuntu* bin **gon** **luk-aran** *jurlaka-yu*.
 NAMEand NAMEand 2PL NF **go** **look-around** bird-DAT
 "LD and WB and you **went searching** for the bird."
 (FM009.B: SS18yr: Bird story)

On the basis of syntactic criteria, Gurindji-derived coverbs fit well into the Kriol verbal frame, forming a coherent subcategory of the Gurindji Kriol main verbs. However the Gurindji coverbs behave differently morphologically from Kriol-derived verbs. Coverbs are an areal feature of Northern Australian languages (McGregor, 2002) including Jaminjung languages, e.g. Jaminjung, and other Ngumpin languages such as Ngarinyman and Bilinearra. One of the defining morphological characteristics of Jaminjung coverbs is their relative lack of inflections (Schultze-Berndt, 2000, p. 71; 2001, p. 359). Indeed this observation seems to also apply to Gurindji. The only inflections Gurindji coverbs take are an activity suffix *-p*, and a continuative marker *-karra*. They also have various reduplication patterns and take case morphology in subordinate clauses (McConvell, 1996, p. 74-76). These inflections are still found on the Gurindji coverbs in Gurindji Kriol. (136) shows an example of the coverb, with a continuative suffix in Gurindji Kriol:

- (136) an det *karu-ngku* i=m **karrap-karra** *nyanuny* *ngaji*.
 and the child-ERG 3SG.S=NF **look.at-CONT** 3SG.DAT father
 "And the kid, he is **looking** at his father." (FHM161: RX15yr: Ergative pictures)

However this restricted range of Gurindji inflections are the only suffixes which are found on the Gurindji verbs in Gurindji Kriol. These verbs do not take any Kriol verbal

morphology, including the transitive marker *-im*⁸, adverbial suffixes, e.g. *-at* (out) and aspectual suffixes, e.g. *-bat*. Only Kriol verbs receive this morphology, as in example (137) where the verb combines with transitive and continuative suffixes.

- (137) dei bin **boil-im-bat** na nganta hawuj-ta nyuntu
 3SG.S NF **boil-TRN-CONT** DIS DOUBT house-LOC 2SG
 an Nimarra-ngku wayi.
 and SUBSECT-ERG TAG
 "They were **boiling** it up in the house, you and Nimarra, wasn't it?"
 (FM045.B: SE12yr: Conversation)

A1.11.2 Tense and Mood Markers

Gurindji Kriol expresses tense and mood through free morphemes which precede the verb, and some corresponding clitics which attach to the subject pronouns. These morphemes originate in Kriol. Gurindji Kriol distinguishes between non-future (*bin*, =*m*) and future (*garra*, =*rra*) tense, as in (138). *Garra* can also mark obligatory mood. An immediate future clitic =*l* (<will e.g. "they'll") also exists. It has no free form counterpart. Verbs unmarked for tense seem to indicate present time. Another mood marker, *maiti*, is used to indicate a potential event (Munro, 2005, p. 87). In fact this analysis, particularly of the tense system is slightly unsatisfactory. Examples which do not fit into this system can be found perhaps due to some flux and variation in the system. However a full analysis of Gurindji Kriol verbal morphology is beyond the scope of this appendix.

- (138) det karu-ngku kurrupartu-yawung i **garra** kil-im jamut.
 the child-ERG boomerang-PROP 3SG.S FUT hit-TRN turkey
 "The child **is going to** hit the turkey with a boomerang."
 (FHM162: RR23yr: Ergative pictures)

The tense and mood markers have corresponding clitic forms, as shown in Figure 33. These forms attach to subject pronouns (A and S) only.

⁸ This marker is probably lexicalised (Schultze-Berndt per. comm.), and is discussed more in §3.12.5.1 and §3.2.

Figure 30 Free tense forms and their corresponding clitics

	FREE FORM	CLITIC FORM
non-future	<i>bin</i>	<i>=m</i>
future	<i>garra</i>	<i>=rra</i> ⁹
immediate fut	-	<i>=l</i>
desirative	<i>wanna</i>	<i>=na</i>
obligation	<i>garra</i>	<i>=rra</i>

The future form is fairly uncontroversial. However the analysis of the non-future form is not entirely convincing, as it does not extend across the regular pronoun paradigm. For example, it is found on the 1SG, 3PL and 3SG forms (*ai=m*, *dei=m*, *i=m*) but never on the 2SG or 1PL forms (**yu=m*, **wi=m*). Also note that I am analysing *im* (3SG) as *i=m* (3SG=NF) despite the fact that *im* is analysed as the plain 3SG form in Kriol and the non-future clitic is *=in*, forming *im=in*. *im=in* is rarely heard in Gurindji Kriol, only by 30+ speakers. It also must be noted that this analysis is based on an analysis of Light Warlpiri pronominal clitics. In this neighbouring mixed language these clitic forms have completely regularised across the pronoun paradigm (O'Shannessy, 2005, p. 42). Thus the gap in the clitic set in Gurindji Kriol may just indicate a change in progress.

A1.11.3 Auxiliary verbs

A set of auxiliary verbs and clitics of Kriol-origin are used in Gurindji Kriol. Munro (2005, p. 101-02) describes these auxiliary verbs as a small closed class which affect the mood and aspect of an clause. However these verbs are distinguished from tense and mood markers by their ability to act as main verbs. The tense and mood markers cannot stand on their own.

⁹ In Light Warlpiri, O'Shannessy says that *=rra* and *=l* are in free variation.

Munro compares these structures with the coverb-finite verb structure of the substrate Marran and Gunwinyguan languages. Similar to Gurindji (see §A1.2.1), in these languages, the coverb carries the semantic weight of the verb complex, with the finite verb contributing the TAM information. Munro compares the Kriol auxiliary verbs with the Marran and Gunwinyguan coverbs, concluding that these verb categories are not equivalent. For example, Kriol auxiliary verbs can occur independent of Kriol main verbs and do not take the semantic load of the verb complex. Indeed it is not clear why Munro compares the Kriol auxiliary verbs with coverbs when Kriol main verbs seem like more likely candidates for coverb equivalence. I suggest that these structures do have some similarities, though clearer parallel structures are found in Gurindji Kriol.

In Gurindji Kriol some types of constructions pattern closely with Gurindji inflecting verb-coverb structures. The Gurindji Kriol auxiliary verb is equivalent to the Gurindji inflecting verb, and the Gurindji Kriol main verb patterns with the Gurindji coverb (§A1.2.1). In these cases the auxiliary verb may add little aspect or transitivity meaning to the verb complex, unlike the examples given above. For example, in (143), *kilim* (hit) adds little meaning to the overall action denoted by *pangkily* (hit on the head). Similarly in Gurindji, an inflecting verb *panana* (hit) would accompany *pangkily* as is shown in (144). Similarly *gedim jawurrap* (get steal) expresses little more than simply *jawurrap* in Gurindji Kriol (145). However in Gurindji a equivalent inflecting verb *manana* (get) would be required grammatically (146). Note the auxiliary verb *gu* does add extra goal meaning in (145). These types of constructions are not found in Kriol.

(143) *karu-ngku kil-im marluka pangkily kungulu-k.* (GK)
 child-ERG **hit-TRN** old.man **hit.head** bleed-INCH
 "The child **hits** the old man **on the head** and makes him bleed."
 (FHM136: TJ22yr: Ergative pictures)

(144) *karu-ngku pa-n-ana marluka pangkily kungulu-k.* (G)
 child-ERG **hit-IMP-PRS** old.man **hit.head** bleed-INCH
 "The child **hits** the old man **on the head** and makes him bleed."

- (145) det *karu* i=m mami bin gu **ged-im** *jawurra-p* (GK)
 the child 3SG.S=NF mother NF go **get-TRN** **steal-ACT**

det pappap.

the puppy

"The kid's mother **goes and steals** the puppy." (FM019.A: CE25yr: Guitar story)

- (146) *karu-wu* *ngamayi* **ma-ni** *jawurra-p* *nanta* (G)
 child-DAT mother **get-PST.PER** **steal-ACT** baby.animal
 "The kid's mother **steals** the puppy."

This has been a brief analysis of the verb complex in Gurindji Kriol. It is clear that much more work is required to tease out the structures and place them within the larger context of coverb structures in northern Australian languages. I leave such research for future work.

A1.11.4 Negation

Gurindji Kriol verbs are negated using auxiliaries which is derived from Kriol - *kaan* (<can't, ≈ won't, can't) (147), *neba* (<never, ≈ didn't) (148) and an imperative form *don* (<don't ≈ don't) (149). The classic Kriol auxiliary *nomo* (<no more) is only heard in the speech of older people in code-switching, not the mixed language.

- (147) yu put-im *nyawa* *kuya* so yu **kaan** *nurt* *laiya-ngku* *nganta*.
 2SG put-TRN this thus so 2SG **NEG** press liar-ERG DOUBT
 "You put this one like that so you **won't** tread on it, you little liar."
 (FM008.C: RR23yr: Conversation)

- (148) an dij *karu-ngku* i **neba** luk det *kaya* kom-in-ap.
 and this child-ERG 3SG.S **NEG** look the monster come-CONT-up
 "And this kid **didn't** see the monster coming towards them."
 (FM054.C: CA19yr: Monster story)

- (149) KW **don** *pirrk-karra* la=im.
 NAME **NEG** snatch-CONT OBL=3SG
 "KW **don't** snatch it from him." (FM003.A: RR23yr: Conversation)

A1.11.5 Verbal bound morphology

Most of the verbal morphology in Gurindji Kriol originates from Kriol. Gurindji Kriol main verbs take transitive marking, adverbial and aspect suffixes. There are some differences in the behaviour of verbal morphology which relate to the language source of the verb.

A1.11.5.1 Transitive marker: *-im, -it*

The Kriol marker *-im* marks transitive verbs and is derived from the Kriol third person pronoun *im* (Meyerhoff, 1996). A lexically conditioned allomorph also exists, *-it*, which can be found marking *gib* (give). The transitive marker can only attach to verbs of Kriol origin. Gurindji-derived coverbs cannot take the transitive marker. Interestingly, in Light Warlpiri, the transitive marker also attaches to Warlpiri-derived verbs (O'Shannessy, 2006, p. 31). In Gurindji Kriol it can often appear as if Gurindji verbs have combined with a transitive marker (150) (c), because the object pronoun is optional in Gurindji Kriol (b). Prosodically, nothing appears to distinguish these two constructions. However I have no recorded examples of two consecutive *im*'s which could be analysed as a transitive marker plus a Kriol pronoun (d).

(150) "It stabbed him"

- (a) i bin pok-**im im**
- (b) i bin pok-**im**
- (c) i bin *turp* **im**
- (d) *i bin *turp*-**im im**

This morpheme is difficult to categorise. There is some debate in Pacific pidgins and creoles about whether this morpheme constitutes inflectional or derivational morphology. For instance, though Faraclas (2003), Mühlhäusler (1984) and Siegel (2004) claim that the transitive marker represents inflectional morphology, McWhorter (2005, p. 12) considers it derivational as does Sankoff (1993). Meyerhoff (1996, p. 65) does not deal with its status explicitly but refers to it as an inflectional marker. In Australian Kriol the

transitive marker has a similarly dubious status. It is not derivational because it is used to *mark* a verb as transitive, and it rarely is added to a verb to *create* a transitive verb, though it is removed in passive clauses. However it is also not found in a paradigm, which casts some doubt on its inflectional status. Schultze-Berndt (per. comm.) suggests instead that it may be lexicalised, which would explain why it tends to be borrowed with its stem and inserted wholesale into the coverb slot of languages such as Jaminjung and Gurindji which have a coverb-inflecting verb structure. In Light Warlpiri, O'Shannessy (2006, p. 30) suggests that it is a valency changing suffix, however, in Gurindji Kriol, it does not derive transitive verbs from intransitive counterparts (except in the case of passive clauses §A1.14.2.7), or exist in a paradigm, so it appears to be neither derivational nor inflectional. Following Schultze-Berndt, it may be considered lexicalised which would explain why Gurindji-derived coverbs do not receive this marker.

Given the lack of transitive marking on Gurindji-derived verbs, there is little to morphologically distinguish intransitive and transitive verbs in Gurindji Kriol. Argument nouns and pronouns are optional, which means that both intransitive and transitive verbs can lack object arguments, although only transitive verbs can have them. Moreover ergative marking is optional and indeed occasionally appears on the subject of an intransitive verb, depending on the information structure of the clause (see §9). For example, in (151) no object is present and the subject is not ergatively-marked. In this example *jampirik* is indistinguishable from an intransitive verb.

- (151) *wumara jampirik ah luk jeya.*
 rock squash ah look there
 "The rock is holding down (the paper), ah look there."
 (FM034.B: SS18yr: Conversation)

A1.11.5.2 Adverbial suffixes

Another set of Kriol suffixes which attach only to verbs of Kriol origin are adverbial suffixes. These suffixes are derived from English prepositions and add directional meaning to the verb, although this meaning can also be somewhat abstract. A list of

adverbial suffixes is provided in Figure 32, and an example of their use in (152). The position of the adverbial suffix relative to other verbal morphology will be described in §A1.11.5.3.

Figure 32 Gurindji Kriol adverbial suffixes (based on Sandefur 1979, p. 118)

SUFFIX	MEANING
<i>-an</i>	on
<i>-ap</i>	up
<i>-at</i>	out
<i>-bek</i>	back
<i>-dan</i>	down
<i>-in</i>	in
<i>-op</i>	off
<i>-ran</i>	around
<i>-wei</i>	away

- (152) det *warlaku-ngku* **luk-in-at** det *ngakparn-tu* hawuj
 the dog-ERG **look-CONT-at** the frog-DAT home
 "The dog is **looking at** the frog's home." (FHM157: KS13yr: Frog story)

A1.11.5.3 Continuative marker: *-bat*, *-karra*, *-bat-karra*, *-in*

In Gurindji Kriol there are two continuative markers which are derived from Kriol: *-in* (<ing), *-bat* (<about) and a Gurindji counterpart *-karra*. These markers are equivalent to the English gerund participle *-ing*. Generally speaking, Kriol continuative markers attach to Kriol stems and Gurindji continuative markers are found on Gurindji verbs. Interestingly, the Gurindji marker can attach to a Kriol verb if preceded by the equivalent Kriol marker, *-bat-karra*, as in (153). It is not clear whether there is any meaning difference between *-bat* and *-bat-karra*. Figure 33 shows the various forms of combinations of continuative marking in Gurindji Kriol. I also suggested in §A1.6.3.1.3 that the locative marker may be functioning as a continuative marker on intransitive verbs of Gurindji origin. This is a tentative analysis, however.

Figure 33 Continuative marking in Gurindji Kriol

FORM	STRUCTURE
<i>-in</i>	attaches to intransitive Kriol verbs
<i>-bat</i>	attaches to transitive Kriol verbs
<i>-ta ?</i>	attaches to intransitive Gurindji verbs ?
<i>-karra</i>	attaches to transitive Gurindji verbs
<i>-bat-karra</i>	attaches to transitive Kriol verbs

(153) det *warlaku-ngku-ma* i=m **kil-im-bat-karra**
 the dog-ERG-DIS 3SG.S=NF **hit-TRN-CONT-CONT**

det *bi-yu* hawuj.
 the bee-DAT home

"The dog, he is **hitting** the bee's home." (FHM165: AN13yr: Frog story)

A1.11.5.4 Activity marker: *-p*, *-ap*

Gurindji Kriol appears to use the Gurindji activity suffix on Gurindji verbs. It has two allomorphs *-p* (vowel-final stem) and *-ap* (consonant-final stem). This suffix implies an extended activity denoted by the verb in Gurindji (McConvell, 1996, p. 75). However it is not clear whether this suffix is still productive in Gurindji Kriol. It is used on few verbs, for example *lungkarra-p* (cry), *jawarra-p* (steal), *taruk-ap* (bathe), and in many cases, it appears that verbs with the suffix are merely variants of verbs without the suffix. For example, both *ngalyakap* (154) and *ngalyak* (155) (lick) are used to describe the same picture in an elicitation activity.

(154) det *kamel-tu* i bin **ngalyak-ap-karra** kengkaru.
 the camel-ERG 3SG.S NF **lick-ACT-CONT** kangaroo
 "The camel was **licking** the kangaroo." (FHM097: SE12yr: Ergative pictures)

(155) *kamel-tu* i=m **ngalyak-karra** im kengkaru na *kutij-ta*.
 camel-ERG 3SG.S=NF **lick-CONT** 3SG.Okangaroo DIS stand-LOC
 "The camel is **licking** the kangaroo who is standing there."
 (FHM124: RS20yr: Ergative pictures)

It also seems to be the case that this suffix has fused with some verbs and the uninflected form is no longer used. For example, *taruk* (bathe) is never used without an activity

suffix, *tarukap*, by Gurindji Kriol speakers. This process was already in progress when McConvell first documented the use of this suffix in Gurindji (McConvell, 1996, p. 74).

A1.11.5.5 Case inflections and subordination

Three Gurindji case markers may be used on both Gurindji and Kriol verbs in Gurindji Kriol subordinate clauses, as is shown in example (156). Their functions are given below, and they are described in more detail in relevant case morphology sections §A1.6.3.1.

Figure 34 The use of case morphology on verbs

FORM	FUNCTION
dative	event in subordinate clause occurs after main clause
locative	event in subordinate clause occurring same time as main clause
ablative	event in subordinate clause occurs prior to main clause

- (156) *nyawa-ma* wi teik-im olabat ***tarukap-ku***.
 this-DIS 1PL.S take-TRN 3PL **swim-DAT**
 "This lot, we take them **in order to go swimming**."
 (FM047.B: EO46yr: Conversation)

A1.11.5.6 Order of verbal morphology

The order of Gurindji Kriol verbal morphology largely follows that of Kriol, with a couple of variations to accommodate verbs and morphology derived from Gurindji.

First, in the case of Kriol-derived verbs, where there is a transitive marker, it is always found closest to the verb stem. The Kriol continuative follows the transitive marker, as in (157).

- (157) an *jintaku* *karu-ngku* i=m **kik-im-bat** futbal.
 and one child-ERG 3SG.S=NF **kick-TRN-CONT** football
 "And one kid is **kicking** the football." (FHM121: CE25yr: Ergative pictures)

When an adverbial suffix is used, it is found in second position, after the transitive marker. In these cases, if a continuative marker is also used, it is the Gurindji suffix and it is found after the adverbial suffix, as in (158). The Kriol equivalent *-bat* is not found in this position.

- (158) det *gel-tu* i=m **fil-im-ap-karra** *ngawa* *pleit-ta*.
 the girl-ERG 3SG.S=NF **fill-TRN-up-CONT** water plate-LOC
 "The girl, she is **filling up** the plate with water."
 (FHM156: KS12yr: Locative pictures)

Intransitive verbs from Kriol reverse the order of the aspectual and adverbial suffixes. The continuative *-in* precedes the adverbial. For example, in (159), *-in* is in second position with *-ap* following.

- (159) an dij *karu-ngku* i neba luk det *kaya* **kom-in-ap**.
 and this child-ERG 3SG.S NEG look the monster **come-CONT-up**
 "And this kid didn't see the monster **coming towards** them."
 (FM054.C: CA19yr: Monster story)

In the case of verbs of Gurindji origin only one of a continuative, activity or case suffix is found. Each of these immediately follows the verb, as has been demonstrated in previous sections.

A1.12 Prepositions

Gurindji Kriol has a small set of prepositions which it derives from Kriol. All of these prepositions are rarely used on their own and generally mark nominals which are already case-marked for the function they are performing. The form and function of these prepositions has been discussed in the nominal morphology sections: *la*, *langa* (§A1.6.3.1.3 and §A1.6.3.1.4), *bo* (§A1.6.3.1.2), and *brom* (§A1.6.3.1.5).

FORM	FUNCTION
la, langa	locative, allative preposition
bo	dative preposition
brom	ablative preposition

la=	oblique pronominal proclitic

In addition to the three main prepositions, *la=* is an oblique pronominal clitic which attaches to a pronoun. The proclitic-pronoun structure cross-references any oblique element in semi-transitive (§A1.14.2.5) or di-transitive constructions (§A1.14.2.6): (160) and (161) respectively. This preposition-pronoun construction also cross-references dative-marked nominals such as benefactive and animate goal constructions and locative and ablative nominals, as in (162) and (163).

- (160) *kajirri-ngku* i=m *jarrakap* **la=im** *karu-yu*.
 old.woman-ERG 3SG.S=NF talk **OBL=3SG** **child-DAT**
 "The old woman talks **to the child**." (FHM137: VB20yr: Monster story)

- (161) *wan karu-ngku* i *gib-it* **la=im** *keik*
 one child-ERG 3SG.S give-TRN **OBL=3SG** cake

kajirri-yu *makin-ta*.
old.woman-DAT sleep-LOC

"A child gives a cake **to the old woman** who is sleeping there."
 (FHM123: CA19yr: Allative pictures)

- (162) *det mangarri* *bin jak* **la=im** *ngarlaka-ngka*.
 the fruit NF fall **OBL=3SG.O** **head-LOC**
 "The fruit fell **on her head**." (FHM014: CE25yr: Hunting story)

- (163) *i bin jawarra* **la=im** *det gita* *det baba-wan-tu*.
 3SG.S NF steal **OBL=3SG.O** the guitar the brother-NMZ-ERG
 "Her brother stole the guitar **from her**." (FHM055: JV11yr: Guitar story)

A1.13 Exclamatives

A final word class is the exclamatives. Most of these are derived from Gurindji, including *warta*, *wartarra*, *wartayi* (goodness!), *wartiti*, *ankaj* (oh dear!, poor thing!) and *yakatayi* (ouch!). These do not inflect in any way, and seem to be flexible in their position relative to other clausal constituents. In this respect they behave like adjuncts (see §A1.14.3). For example, in both (164) and (165) the exclamative occurs on the periphery of the clause.

- (164) *wartayi* ai=l kil yu *tarl* igin *ngarlaka-ngka*.
goodness 1SG.S=IF hit 2SG crack too head-LOC
 "Goodness I'll crack you on the head as well." (FM008.C: RR23yr: Conversation)

- (165) *nyawa-rrat* na dij wet-wan yet wi=na
 this-PL DIS this wet-NMZ yet 3PL.S=MOD

ged-im-bat *yakatayi*.
 get-TRN-CONT **ouch**
 "These plants which aren't dry yet, we want to get them, **ouch**"
 (as she pulls one out, it jabs her) (FM043.B: RR23yr: Conversation)

A1.14 Gurindji Kriol simple clauses

The following section overviews simple clauses in Gurindji Kriol. Included are verb-less clauses and verbal clauses. A number of different clause types are described in each section. Complex clauses, conjunctions and complementisers are not discussed at all. It must be noted that this section is a preliminary description of these clauses and is merely meant as an introductory reference to help the reader interpret examples given in the rest of the thesis. A fuller analysis is beyond the scope of this thesis.

A1.14.1 Verb-less clauses

Due to a lack of copula verb in Gurindji Kriol, it is difficult to distinguish an ascriptive or existential clause from a simple noun phrase. These verb-less clauses can appear to be juxtapositions of nominals in much the same configuration as NPs. However, I follow

McConvell (1996, p. 78) in distinguishing between these phrase-types using the presence of coreferential pronouns to identify a verb-less clause. In the case of Gurindji, these coreferential pronouns are bound. However in Gurindji Kriol they are free pronouns derived from Kriol. McConvell also describes verb-less clauses without a coreferential pronoun. He suggests that these may be differentiated from simple NPs by prosody, that is, two tone groups separating the subject and predicate. Indeed this type of prosodic break can be identified in Gurindji Kriol, often on the basis of the discourse marker *na* which can end a tone group. However I will not describe these clause types as this distinction is not strongly syntactically-based.

A1.14.1.1 Ascriptive constructions

Ascriptive clauses describe a subject as having a particular property. These clauses consist of a subject noun and nominalised adjective with an intervening coreferential pronoun.

- (166) *ankaj* det *karu* im *yapakayi-wan*.
 poor.thing the child 3SG small-NMZ
 "Poor thing, that child is only a baby." (FM038.C: EO46yr: Conversation)

A1.14.1.2 Existential constructions

Existential clauses consist of a subject with locative phrase, with an intervening coreferential pronoun.

- (167) det *warlaku* im *andanith* *jiya-ngka*.
 the dog 3SG underneath chair-LOC
 "The dog is underneath the chair." (FHM005: RO10yr: Locative pictures)

A1.14.1.3 Possessive constructions

Nominals may also act as predicates, taking another nominal argument in a possessive construction. In these clauses the head is marked dative. The head may be a noun with a dative marker (168) or a dative pronoun (169). The Gurindji distinction between in/alienable possession (um/marked heads) only remains in older Gurindji Kriol speakers. These constructions have already been discussed in §A1.6.3.1.2 (nouns) and §A1.8 (pronouns), and will be examined in more detail in §6.

(168) jeya **rabbi-tu** **hawuj** nyawa-ma.
 there **rabbit-DAT** **home** this-DIS
 "There this one is the **rabbit's home**." (FM031.C: AC11yr: Possession books)

(169) an i=m tok bo **nyanuny** **hasban** na.
 and 3SG.S=NF talk PREP **3SG.DAT** **husband** DIS.
 "And she talks to **her husband** now." (FHM002: AC11yr: Dative pictures)

A1.14.2 Verbal clauses

A verbal clause consists of a predicate, the verb, and elements which serve one of three grammatical relations: argument (subject, object, indirect object), adjunct and complement. These grammatical relations need to be distinguished because the semantic and grammatical relationship between the predicate and the other clausal elements determines the clause type. I distinguish three grammatical relations: arguments, adjuncts and complements using Bresnan's work (1982) which has been applied to Australian languages, for instance Wambaya (Nordlinger, 1998a, p. 53-56).

Arguments, adjuncts and complements can be distinguished by two criteria: whether or not the NP is subcategorised for by the verb and how restricted it is semantically. Thus adjuncts can be differentiated from arguments and complements because adjuncts do not fit into the subcategorisation frame of the verb. No verb requires an adjunct and adjuncts freely occur with any verb and clause type. Included in this category are most locative noun phrases, and a number of noun phrases which are dative-marked or accompanied by

a dative preposition including benefactives and purposives. The further criteria of semantic restrictability is required to separate arguments from complements. This criteria refers to how tightly semantic roles are linked to a grammatical role. Arguments are semantically unrestricted, that is, a number of semantic roles may link to an argument. For example, a subject may be an agent or experiencer, or indeed patient in the case of passive clauses. Complements are more semantically restricted, with particular semantic roles associated with them. Moreover they can only combine with particular verb types. For example, some motion verbs take noun phrases which are marked in some way to indicate direction of movement.

Figure 35 The case frame of clause types in Gurindji Kriol

STRUCTURE	SUBJECT	OBJECT 1	OBJECT 2	COMPLEMENT
intransitive	NOM	-	-	
	NOM	-	-	ABL/ALL
transitive	ERG	ACC	-	
	ERG	ACC	-	LOC
semi-transitive	ERG	DAT	-	
ditransitive	ERG	ACC	DAT	
	ERG	ACC	ACC	
passive	NOM			

Though most Pama-Nyungan languages are non-configurational with word order determined by information structure (Blake, 1983), Gurindji Kriol uses AVO as its pragmatically unmarked word order. Subjects (A and S) tend to precede the verb, and objects (DO and IO) follow the verb though their position is more flexible. Adjuncts and complements have fewer restrictions. A discussion of word order in relation to the position of the subject and ergative marking appears in §9.5.3.

A1.14.2.1 Intransitive clauses

Intransitive clauses consist of a verb and a subject with no object. Adjuncts may be added to express the location or time of an action. Subjects are generally not case-marked, though ergative case marking is occasionally used in discourse prominent structures where the activity of the subject is being highlighted (see §9.6).

- (170) *warlaku* *i=m* *makin* *autsaid* *shop-ta*.
 dog 3SG.S=NF sleep outside shop-LOC
 "The dog, it sleeps outside the shop." (FHM066: LS20yr: Locative pictures)

A1.14.2.2 Intransitive clause with spatial complement

Intransitive clauses with motion verbs may occur with a spatial complement. For example, *gon* (go) takes a complement which refers to the direction of movement towards a goal. Other common motion verbs include *rarraaj* (run), *futwok* (walk), *flai* (fly), *mingip* (crawl) and *partaj* (go up). This goal may be a bare NP (171), a PP (172) or a case-marked NP (173) - (175). A number of factors such as the type of verb and goal noun determine the use of these complement structures. These alternatives and the motivations for them are discussed in §8.

- (171) *jintaku* *kirri* *i=m* *gon* **Lajamanu**.
 one woman 3SG.S=NF go **place.name**
 "One woman is going towards Lajamanu." (FHM121: CE25yr: Allative pictures)

- (172) *jurlaka* *gon* **langa** **tri**.
 bird go **PREP** **tree**
 "A bird is flying **towards the tree**." (FHM118: AR19yr: Allative pictures)

- (173) *ola* *karu* *dei* *rarraaj* **hawuj-jirri**.
 all child 3PL run **house-ALL**
 "All the children run **towards the house**." (FHM148: KP12yr: Allative pictures)

- (174) *karu-walija rarra-karra hawuj-ta.*
 child-PAUC run-CONT house-LOC
 "The children are running towards the house."
 (FHM147: TA12yr: Allative pictures)
- (175) *nyila jinek i=m gon yapart la=im kajirri-yu.*
 that snake 3SG.S=NF go sneak OBL=3SG.O woman-DAT
 "That snake sneaks up **on the old woman.**" (FHM125: LE18yr: Allative pictures)

A1.14.2.3 Transitive clause

Transitive clauses take an accusative object. Often the subject also takes ergative marking. However in 33.5% of cases it appears unmarked. Other variables in the transitive clause include the position of arguments and the presence of coreferential pronouns. For example, in 87.5% of transitive clauses the subject NP occurs pre-verbally. Post-verbal subjects require a coreferential pronoun and ergative marking (OsVS) (176) where pre-verbal subjects do not (SVO) (177), though they may appear in left-dislocated structures with a coreferential pronoun (SsVO) (178). This is discussed in more detail in §9.

- (176) *an kengkaru i bin kil-im kurrupartu-yawung det karu-ngku.*
 and kangaroo 3SG.SNF hit-im boomerang-PROP the child-ERG
 "And the kangaroo he hit with a boomerang, **the child did.**"
 (FHM082: AC11yr: Ergative pictures)
- (177) *det karu bin kil-im kengkaru kurrupartu-yawung.*
the child NF hit-TRN kangaroo boomerang-PROP
 "**The child** hit a kangaroo with a boomerang."
 (FHM065: SS18yr: Ergative pictures)
- (178) *jintaku-ngku karu-ngku i=m jut-im kengkaru*
one-ERG child-ERG 3SG.S=NF shoot-TRN kangaroo
kurrupartu-yawung.
 boomerang-PROP
 "**One child, he** shoots the kangaroo with a spear."
 (FHM137: VB20yr: Ergative pictures)

The position of the accusative object seems to be as flexible as an adjunct. It may appear directly after the verb SVO (179), after the verb in conjunction with a coreferential pronoun SVoO, as a fronted NP OSVo (180), as a fronted NP with a post-verbal subject (OsVS) (181) and post-adjunct (SVAdjO) (182). Information structure and the prominence of the object and other referential NPs largely determines the position of the object.

(179) an *warluku-ngku* i bin bait-im **det** *marluka* *wartan-ta*.
 and dog-ERG 3SG.S NF bite-TRN **the old.man** hand-LOC
 "The dog bit **the old man** on the hand." (FHM082: AC11yr: Locative pictures)

(180) *jintaku* *marluka* *warlaku-ngku* i=m bait-im im leg-*ta*.
one old.man dog-ERG 3SG=NF bite-TRN 3SG.Oleg-LOC
 "The dog bit **one old man** on the leg." (FHM082: AC11yr: Locative pictures)

(181) *ngumpit* i bin bait-im *warlaku-ngku* *wartan-ta*.
man 3SG.S NF bite-TRN dog-ERG hand-LOC
 "The dog bit **the man** on the hand." (FHM070: LS20yr: Ergative pictures)

(182) abta det jinek bin bait-im leg-*ta* **det** *marluka*.
 after that snake NF bite-TRN leg-LOC **the old.man**
 "Next the snake bit **the old man** on the leg."
 (FHM066: LS20yr: Locative pictures)

A1.14.2.4 Transitive clause with spatial complement

Some verbs, including "put" and "take" type verbs take a spatial complement as well as a direct object argument. The spatial complement is usually a locative or allative marked NP, with variants. For example, the "put" verb may appear with a direct object (the entity being acted upon) and a goal for the object (usually a place) which is marked with locative case (183), or occasionally double-marked with a Kriol preposition by younger speakers (184).

- (183) det *kirri* i=m put-im koldringk **jiya-ngka**.
 the woman 3SG.S=NF put-TRN soft.drink **chair-LOC**
 "The woman put the soft drink **on the chair**."
 (FHM060: RR23yr: Locative pictures)

- (184) an i=m put-im **langa** **tebl-ta** jumok.
 and 3SG.S=NF put-TRN **PREP** **table-LOC** cigarette
 "And he put the packet of cigarettes **on the table**."
 (FHM002: AC11yr: Locative pictures)

A1.14.2.5 Semi-transitive clause

Semi-transitive clauses are composed of a subject and a dative object. Speaking and perception verbs most commonly form semi-transitive clauses, for example e.g. *tok* and *jarrakap* (talk to), *jingat* (call), *rungap* (bark at), *kiyap* (whisper to), *yurrk* (tell a story); and *karrap* and *lukat* (look at), *warlakap* and *lukaran* (search), *lijin* (listen) and *wukarra* (afraid).

The dative object is most often marked by a dative preposition *bo* (<for) (185). Note that these clauses differ from Kriol where a locative preposition, *langa* would be found instead, with the dative preposition reserved for benefactive or purposive constructions, e.g. to talk on behalf of somebody. Gurindji Kriol patterns more closely with Gurindji in this respect where no distinction is made between direct objects, purposive constructions and benefactors (see §8.4.2.1). It also occurs unmarked in combination with a coreferential pronoun which takes the preposition *la* (186). Semi-transitive clauses occur with a dative-marked object (187) or double marking of the object with dative morphology and a preposition and coreferential pronoun (188).

- (185) *naja-wan* *kajirri* *jing-in-at-karra* **bo** *nyanuny* *karu*.
 another-NMZ old.woman call.out-CONT-out-CONT **PREP** 3SG.DAT child
 "Another woman calls out **to her child**." (FHM027: CA19yr: Dative pictures)

- (186) *kirri* *jing-in-at-karra* **la=im** *karu*.
 woman call-CONT-out-CONT OBL=3SG child
 "The woman calls **to the child**." (FHM037: CE25yr: Dative pictures)

(187) *kirri jintaku jing-in-at nyanuny karu-yu.*
 woman one call-CONT-out 3SG.DAT child-DAT.
 "One woman calls **to her child.**" (FHM026: TJ22yr: Dative pictures)

(188) *abta jarran i=m jing-in-at la=im*
 after that 3SG.S=NF call-CONT-out OBL=3SG

warlaku-yu nyanuny-ku.
 dog-DAT 3SG.DAT-DAT
 "After that she calls **to her dog.**" (FHM067: LE18yr: Dative pictures)

A1.14.2.6 Ditransitive clause

Finally there is a small group of ditransitive clauses which are usually headed by a "give" type verb. These clauses consist of an accusative object and dative indirect object, and alternate with a clause with two accusative objects. This dative alternation is derived from Kriol where two accusative objects alternate with an accusative object and locational phrase (Sandefur, 1979, p. 79-80). Though this alternation is derived from Kriol, the indirect object is marked dative rather than locative in Gurindji Kriol, suggesting a deep structural influence from Gurindji. For example indirect objects are always dative-marked in Gurindji.

The most common type of ditransitive clause is the double accusative. In these constructions the direct object follows the indirect object, as in (189). The direct object and indirect object are distinguished by their ability to be referenced by a pronoun. For example a pronoun can be the indirect object, (190), but not the direct object.

(189) *det malyju gib-it det man jumok*
 the boy give-TRN the man cigarette.
 "The boy gives the man a cigarette." (FHM002: AC11yr: Dative pictures)

(190) *an den i bin gib-it im det Sprite*
 and then 3SG.SNF give-TRN 3SG the Sprite
 "And then she gives him the bottle of Sprite."
 (FHM002: AC11yr: Dative pictures)

The order of the objects is reversed in the dative variant of the ditransitive. The IO follows the DO and is dative-marked (191). The IO may also be referenced by an oblique proclitic-pronoun complex, as in (192).

- (191) det *kirri* i=m gib-it jumok *ngumpit-ku*.
 that woman 3SG.S=NF give-TRN smoke **man-DAT**
 "That woman, she gives the smokes **to the man.**"
 (FHM060: RR23yr: Dative pictures)

- (192) *nyila-nginyi-ma* i=m gib-it **la=im** koldringk **gel-ku**.
 that-ABL-DIS 3SG.S=NF give-TRN **OBL=3SG** soft.drink **girl-DAT**
 "After that, she gives the soft drink **to the girl.**"
 (FHM067: LE18yr: Dative pictures)

As with all Gurindji Kriol clauses, all arguments within the ditransitive clause are optional. However it is more common to elide the indirect object. For example, in (193), the recipient is only referred to by oblique proclitic-pronoun complex.

- (193) *kajirri* bin gib-it **la=im** jumok
 old.woman NF give-TRN **OBL=3SG** cigarette
 "The old woman gave a cigarette **to him.**" (FHM031: CR54yr: Dative pictures)

A1.14.2.7 Passive clause

Gurindji Kriol also derives a *get*-passive structure from Kriol, but with some Gurindji innovations. In these structures, the verb form and clausal case structure changes. First the auxiliary verb *ged* (<get) is added and the transitive marker is lost from the main verb. For example, in (194) *baitim* becomes *ged bait*. Secondly the patient is moved into subject position and the agent becomes an adjunct. The agent loses ergative case marking and acquires ablative case instead. The Kriol *brom* preposition may be used instead of the ablative marker. It is not clear whether it is possible to derive passive clauses using Gurindji-derived verbs.

- (194) man i bin **ged bait** warlaku-nginyi wartan-ta.
 man 3SG.SNF **get bite** dog-ABL hand-LOC
 "The man **got bitten by** a dog on the hand."
 (FHM069: LS20yr: Ergative pictures)

- (195) wan marluka i=m **ged bait brom** wan warlaku fut-ta-rni.
 one old.man 3SG.S=NF **get bite from** one dog foot-LOC-ONLY
 "One old man **got bitten by** a dog right on the foot."
 (FHM090: CA19yr: Ergative pictures)

A1.14.3 Spatial/temporal adjuncts

The final constituent of the clause is the adjunct which is generally a nominal adjunct, or something verging on a prepositional phrase. For the discussion of adjuncts in relation to the clause and its internal structure I will only examine locative adjuncts. I will not provide or describe a full inventory of adjunct types.

First, though there are some generalisations which can be made about the word order of Gurindji Kriol, the position of adjuncts is much more flexible. Generally they occur on the peripheries of a clause, either clause initial (196) or clause final (197). The position of the adjunct is largely dependent on discourse structure, with first position usually associated with new or focussed information. It must be noted however, that adjuncts may intervene between the verbs and their arguments as was seen in §A1.14.2.3, example (184). This are not common, however, and it may be the case that, in this example, *boi* is a right-dislocated argument which accounts for the unusual word order.

- (196) warlaku-ngku i=m bait-im boi wartan-ta.
 dog-ERG 3SG.S=NF bite-TRN boy **hand-LOC**
 "The dog bit the boy **on the hand**." (FHM063: CR54yr: Locative pictures)

- (197) **fut-ta** i bin bait-im im.
foot-LOC 3SG.SNF bite-TRN 3SG.O
 "**On the foot**, it bit him." (FM031.A: AC11yr: Locative pictures)

The internal structure of a simple spatial adjunct has been described in the nominal section. Most commonly, the head nominal of the noun phrase is case-marked, as was

seen in the previous two examples. Younger speakers double-mark location using a Kriol preposition in combination with a Gurindji case-marker (198). Occasionally a preposition is used without case-marking, as in (199). It is not clear whether these examples are a part of the Gurindji Kriol system or represent code-switching into Kriol.

(198) *jintaku* *warlaku-ngku* *i* *bin* *bait-im* *im*
 one dog-ERG 3SG.SNF bite-TRN 3SG.O

marluka **la** **leg-ta.**
 old.man PREP leg-LOC

"A dog bit the old man **on the leg.**" (FHM052: AC11yr: Locative pictures)

(199) *warlaku-ngku* *bait-im* *im* *marluka* **la** **leg.**
 dog-ERG bite-TRN 3SG.O old.man PREP leg

"The dog bit the old man **on the leg.**" (FHM051: JV11yr: Locative pictures)

The use of the locative suffix versus the locative preposition is largely age-related and discussed in more detail in §7.4.2.

More complex locative adjuncts also vary in their internal constituent order. Nominal heads are generally found phrase-final (200), though they can also front a noun phrase (201). Regardless of this variation, the head receives case-marking. For example in both of the locative adjuncts below, "tree" receives a locative marker regardless of its position.

(200) *tubala* *karu* *jei* *warrkap-karra* *kanyjurra* *karnti-ngka.*
 two child 3PL.S dance-CONT down tree-LOC

"The two kids dance **under the tree.**" (FHM082: AC11y: Locative pictures)

(201) *karu-kujarra* *warrkap-karra* *karnti-ngka* *kanyjurra.*
 child-DU dance-CONT tree-LOC down

"The two kids are dancing **under the tree.**"

(FHM052: AC11yr: Locative pictures)

A1.15 Conclusion

This appendix provided an overview of Gurindji Kriol structures. Many structures discussed such as passive clauses and the use of case markers are not found in either of the source languages (see §1.5.2), which indicate that Gurindji Kriol operates as an autonomous system which can be distinguished from its source languages. Finally the nature of a sketch grammar is such that the details of many structures are not discussed here, and variation not described in detail. In particular, variation is a feature of the Gurindji Kriol system and a result of competition between functionally equivalent Gurindji and Kriol structure (§10.3). More detail about four constructions is provided in §6 (possessive constructions), §7 (topological relations), §8 (goal constructions), §9 (argument marking and discourse prominence).

APPENDIX 2. 200 WORD LIST

This 200 word list is based on the Swadesh list found in:

Swadesh, M. (1950). Salish internal relationships. *International Journal of American Linguistics*, 16, 157-167.

Here I use the Swadesh list to quantify the lexical contribution of Gurindji and Kriol to Gurindji Kriol. See §A1.3.1 for a discussion of how the list is used to characterise the lexicon of Gurindji Kriol.

KEY:

Blank cell - no form used
 * - preferred form (where both Kriol and Gurindji forms are in use)
 Bold font - no form exists in Gurindji

	KRIOL	GURINDJI		KRIOL	GURINDJI
lie (on side)		makin	wide	bigija	*jangkarni
many	*loda/bigmob	jarrwa	woman	woman	*kirri
head		ngarlaka	this	dijan	*nyawa
man (male)	man	ngumpit	with (accomp.)	garram	*yawung
flower	flower		star	*star	jajalya
here	hiya	nyawa-ngka	tongue	*tang	jalany
die (v)		tampang	sand		janyja
dig		karan	say (v)	*tok	jarrakap
good	*gudwan	punyu	tail		jawurt
because	bikus		one	wan	jintaku
back	*bihain	ngumayi(la)	nose		jitji
father	Daddy		smoke		jungkart
I	ai	ngayu	walk (v)	*wok	kalu
hit (v)	kilim		tooth (front)		kangarnta
at	la	*-ta/-ngka	night	*naitaim	kapurta
dirty	dirtiwan		scratch (itch)		karan
belly		majul	other	*najawan	kari
fly (v)	*flai	tiwu	stick (of wood)		karnti
hold (in hand)	oldim		tree	*tri	karnti
drink (v)	*drink/abim	kukij	see (v)	*luk	karrap
hunt (v game)	*hunting	murrap	two	tubala	kujarra
flow (v)		rarraj	stand (v)		kutij
fall (drop v)	*baldan	jak	sleep (v)		makin
dry (substance)	draiwan		seed		mangarri
meat (flesh)	*bip	ngarin	woods		manyja
live	top		wife	*waip	mungkaj
hear	*lijin	kurru	three	*jirribala	murrkun

	KRIOL	GURINDJI		KRIOL	GURINDJI
kill (v)		tampang	we	wi	ngaliwa
fat (substance)		wararr	smell (perceive)		ngapuk
in	insaid	*walyak	water		ngawa
animal	enimal		neck	*nek	ngirlkirri
big	bigijawan	*jangkarni	person		ngumpit
lake	billabong/wodahol		what?	*wat	nyampa
guts	*milkgut	lupu	they	jei	nyarruluny
grass	graj	*yuka	that	jarran	nyila
green	grinwan		there	jeya	nyila-ngka
name	*neim	yini	you (sg & pl)	yu	nyuntu
husband	*asban	ngumparna	vomit (v)		paku
child (young)		karu	river	*riba	pinka
long	longwan		wing	*wing	pungkirr
give	gibit		swim		tarukap
if	ip		wash (v)		tarukap
float (v)	flout/ontop		stab (or stick, v)		turp
how	hau		turn (veer)		walik
count	kauntim		rotten (logs)		wankaj
leaf	lif	kulyarru	where?	*weya	wanyjika
fog		jungkart	stone		wumara
freeze (v)	freeze		sun		wurlngan
far	longwei	*yikili	small		yapakayi
ear		langa	short		yapakayi
all	ola		narrow		yapakayi
mouth	mawuj	*kangarnta	yellow	yelou	
heart	hart	*mangarli	throw	jakim	
fish	fij	*yawu	spit (v)	spit	
foot	*fut	jamana	straight	streitwan	
earth (soil)		janyja	sing (v)	jing	
dust		janyja	sharp (knife)	sharpwan	
eat	*abim	jartkarra	sit (v)	jidan	
bird		jurlaka	play (v)	pleibat	
egg		kampij	skin (of person)	skin	
hair		kartpi	thick	bardbaga	
bite (v)	*baitim	katurl	pull (v)	pulim	
come	*kom	kawayi	rope	roup	
ashes		kawurn	new	newwan	
fight (v)	fait	kuli	some	jambala	
blood		kungulu	rain (v)	rein	
cloud		maarn	road	roud	
cold (weather)		makurru	root	rut	
fruit		mangarri	swell (v)	swelup	

	KRIOL	GURINDJI		KRIOL	GURINDJI
liver		marlumpa	wind (breeze)	wind	
eye		mila	sky	skai	
mother	*Mummy	ngamayi	worm	worm	
mountain		ngarlaka	year	yiya	
he	im	nyantu	think	jingk	
know (facts)	*nou	pina	wet	wetwan	
bad		wankaj	not	not	
dog		warlaku	sea (ocean)	si	
fire	*faya	warlu/pupa/jawi	split (v)	kutim ap	
hand		wartan	thin	bonbaga	
fear (v)		wukarra	smooth	smujwan	
louse		wurru	wipe	waip	
laugh (v)		yayip	when?	wattaim	
ice	ais		warm (weather)	hotbala	
left (hand)	lef		who?	hu	
day	deitaim		salt	jal	
feather (large)	feather		snake	jinek	
and	an		near	kuloja	
dull (knife)	blant-wan		sew (v)	mendim	
bark (tree)	bark		old	olwan	
black	blekwan		push (v)	pujim	
bone	boun		right (correct)	raitwan	
blow (wind)	blou		red	redwan	
burn (intr)	barnim		right (hand)	right	
cut (w. knife)	kutim		rub	rubim	
few	ab		snow	snou	
four	fobala		suck (v)	sukim	
heavy	hebiwan		tie	taiimup	
leg	leg		white	waitwan	
five	faib-bala		squeeze (v)		july

APPENDIX 3. CONSISTENCY IN THE EXPRESSION OF AN EVENT

The lexical, morphological and syntactic consistency with which events are expressed in Gurindji Kriol helps support its status as an autonomous language, rather than code-switching between two languages. The following examples of "the dog bit the man on the hand" appear 18 times from different speakers with a full nominal is used for "the dog", "the man" and "on the hand". Here these sentences are analysed for their similarity in the use of lexemes, case morphology and word order. The results are discussed in §1.5.2.



"The dog bit the man on the hand."

- (1) *warlaku-ngku i=m bait-im wartan-ta marluka jintaku.*
- (2) *weya det marluka an warlaku bin bait-im im wartan-ta.*
- (3) *warlaku-ngku bait-im wan marluka la wartan.*
- (4) *an det warlaku-ngku i bin det marluka-ma wartan-ta na.*
- (5) *det marluka wartan-ta wan warlaku bin bait-im im.*
- (6) *det warlaku i=m katurl im marluka wartan-ta-rni.*
- (7) *det marluka warlaku bin bait-im im wartan-ta.*
- (8) *det marluka warlaku bin bait-im wartan-ta.*
- (9) *warlaku-ngku bait-im wartan-ta marluka.*
- (10) *an warlaku-ngku i bin bait-im det marluka wartan-ta.*
- (11) *warlaku-ngku bait-im wan marluka la wartan.*
- (12) *warlaku bin bait-im marluka la wartan.*
- (13) *warlaku-ngku i=m bait-im im marluka wartan-ta.*
- (14) *warlaku bin bait-im im marluka-ma wartan-ta.*
- (15) *jintaku marluka warlaku-ngku bait-im wartan-ta-rni.*
- (16) *det warlaku-ngku i bin bait-im det marluka wartan-ta-rni.*
- (17) *marluka jintaku warlaku-ngku katurl im wartan-ta.*
- (18) *warlaku-ngku i=m bait-im jintaku marluka wartan-ta.*

ELEMENT	GURINDJI	%	KRIOL	%
dog	warlaku	100	dog	0
hand	wartan	100	bingka	0
old man	marluka	100	olman	0
bite	katurl	11	baitim	89
argument marking	ERG	61	AV	66.5
on	LOC	83.5	la	16.5
pronouns	Clitics	0	Free forms	100
verbal inflection	Inflecting V	0	Aux Verbs	100

APPENDIX 4. SAMPLE OF GLOSSED GURINDJI KRIOL TEXTS

1. FM60.A Sample conversation between 20 year old women at Jinparrak (Old Wave Hill Station)

Speakers: Rosy Smiler Nangari (RS23yr)
 Lisa Smiler Nangari (LS23yr) RS and LS are twins.
 Cassandra Algy Nimarra (CA22yr)
 Vanessa Bernard Nimarra (VB23yr)
 Anastasia Bernard Namija (AB5yr) AB is VB's daughter.

Date: 18 June 2006
2. FM057.C Sample conversation between 40 year old women at Jinparrak (Old Wave Hill Station)

Speakers: Ena Oscar Nanaku (EO49yr)
 Frances Oscar Nanaku (FO45yr)
 Sarah Oscar Nanaku (SO42yr) All sisters
 Connie Ngarlmaya Nangala (COold)

Date: 10 June 2006
3. FM045.D Child-directed telling of "The bicycle story" (see §1.6.2.1.2)

Speaker: Cecelia Edwards Nangari (CE28yr) BP's mother
 Becky Peter Nangala (BP3.3yr)

Date: 24 August 2005
4. FM017.D Solo telling of "The monster story" (see §1.6.2.1.2)

Speaker: Samantha Smiler Nangala (SS18yr)

Date: 10 March 2004
5. FHM141 Solo telling of "The frog story" (see §1.6.2.1.2)

Speaker: Vanessa Bernard Nimarra (VB23yr)

Date: 14 June 200
6. FHM149 Solo telling of "The frog story" (see §1.6.2.1.2)

Speaker: Rosy Smiler Nangari (RS23yr)

Date: 18 June 2006

A4.1 FM060.A

RS: wi shud du-im nyuntu gon wok-aran wait wat
 1PL.S should do-TRN 2SG go walk.around wait what

yu du-im kaputa-ngka gon disco-ngkirri karu-walija
 2SG.S do-TRN night-LOC go disco-ALL child-PAUC

warrkap-ta.

dance-LOC

"We should do it when you go for a walk. Wait, what did you do last night - the kids went to the disco and danced."

LS: ah yeah naitaim no, kaputa-ngka wi bin gu
 ah yeah night.time no night-LOC 1PL.S NF go

disco-ngkirri karrap-karra ola karu-walija disco-ngka.
 disco-ALL look.at-CONT all child-PAUC disco-LOC

"Ah yeah last night, last night we went to the disco to watch the kids dancing."

CA: eni jangkakarni bin warrkap?
 any big.REDUP NF dance
 "Did any adults dance?"

LS: loda, jeya wi bin karrap jem tumaj karu-walija
 lots there 1PL.S NF look.at 3PL.O because child-PAUC

jei bin warrkap.

3PL.S NF dance

"Lots there. We watched the kids because they were dancing."

RS: bloke-walija jangkakarni dei bin.
 bloke-PAUC big.REDUP 3PL.S NF
 "A lot of blokes, big fellas, were there too."

LS: an, eniweya, an yapakayi gel jangkakarni gel dei=m
 and anyway and small girl big.REDUP gel 3PL.S=NF

warrkap-karra an boi-walija.

dance-CONT and boy-PAUC

"And anyway young girls and teenagers they were all dancing and boys too."

LS: dei warrkap-karra naitaim na disco-ngka an karrap-karra dem.
 3PL.S dance-CONT night.time DIS disco-LOC and look.at-CONT 3PL.O
 "They danced last night and we watched them."

CA: hu garram *ngunti?*
 who have lighter
 "Who's got a lighter?"

RS: no *ngunti-waji* ai tingk.
 no light-AGENT 1SG.S think
 "I don't think we have a lighter."

CA: nah opin-im hiya ai bin bring-im.
 no open-TRN here 1SG.S NF bring-TRN
 "No open it here, I did bring one."

RS: no *ngunti-waji*.
 no light-AGENT
 "No lighter."

RS: yeah Chloe wat yu *karrap-karra* det *jurlaka* i=m
 yes NAME what 2SG.S look-at-CONT the bird 3SG.S=NF

 gon jarrei na, gon tata *tiwu*.
 go that.way DIS go go fly
 "Yeah Chloe, why are you still watching that bird, it's flown off now."

CA: ged det laita harriap weya yu put-im?
 get the lighter hurry.up where 2SG.S put-TRN
 "Get the lighter. Hurry up. Where did you put it?"

CA: ah *nyanawu-rni* wen *karu-walija* bin hab-im sport yu nou.
 ah you.know-ONLY when child-PAUC NF have-TRN sport you know
 "Ah what about when the kids had sports?"

LS: skul-*ta?*
 school-LOC
 "At school?"

CA: hmm.

LS: jidan deya *Felicity-ngka*.
 sit there NAME-LOC
 "Sit down in Felicity's lap." (Talking to little boy Kayne)

LS: an skul-*ta-ma* dei bin hab-im sport *karu-walija-ngku*.
 and school-LOC-DIS 3PL.S PST have-TRN sport child-PAUC-ERG
 "And the kids had sport at school."

- AB: *ngayu-ngku* win.
1SG-ERG win
"I won (a race)."
- CA: *dei bin hab wat det kala?*
3PL.S NF have what the colour
"They had ... what's the colours?"
- LS: *dei bin hab jirri kala det jirri kala was.*
3PL.S NF have three colour the three colour was
"They had three colours which were."
- LS: *ebri ngumpit kala ngumpit kala yelou blek red.*
every Aboriginal colour Aboriginal colour yellow black red
"Every Aboriginal colour. The Aboriginal colours are yellow, red and black."
- VB: the whole lot like they bin put name on it.
"They associate a name with each colour."
- VB: black for Freeman and yellow for Nova-Peris and red for Johnson.
- VB: all three of them.
- CA: *an nyanawu nyanawu wen wi yusta hab-im xxx*
and you.know you.know when 1PL.S used.to have-TRN xxx

sport carnival ebritaim.
sport carnival every.time
"And you remember when we used to have sports carnivals every year."
- CA: *wi yusta gu kanyjurra la riba inti?*
1PL.S used.to go down PREP river TAG
"We used to go down to the river, hey."
- CA: *Yarralin dei garram jirri team igin nganta turtl*
PLACE.NAME 3PL.S have three team too DOUBT turtle

krokodail an guana an barramandi nganta.
crocodile and gonna and barramundi DOUBT
"At Yarralin they have three teams too - I think turtle, crocodile and barramundi."
- RS: *det person yu rimemba wen wi bin hab-im*
the person 2SG.S remember when 1PL.S NF have-TRN

- ngumpin jintaku i=m gon kaa-rni-rra.*
 man one 3SG.S=NF go east-up-ALL
 "The person, do you remember, when we had one boy and he went east."
- CA: ah yeah.
- CA: *ngu ya-ni warl wayi.*
 cat go-PST.IM get.lost TAG
 "He got lost somewhere, didn't he?"
- RS: no yu kaan *partaj* im *kankula* yu-nta baldan?
 no 2SG.S NEG climb 3SG.O up 2SG.S-WANT.TO fall
 "No you can't climb up on the car. Do you want to fall?"
 (Talking to small boy Keenan who is climbing on the car)
- RS: *wartarra, warta yu-rra bait-im nyawa-ngku-ma*
 goodness goodness 2SG.S-FUT bite-TRN this-ERG-DIS
ngarrak-murlung.
 ?time-PRIV
 "Shit you'll bite it. This one's got no time for that."
- RS: det karu *jintaku* i=m gon *ngawa-ngkirri kanyjurra* darrei.
 the child one 3SG.S=NF go water-ALL down that.way
 "One kid has gone down to the creek that way."
- CA: i=m *wankaj* det *ngawa.*
 3SG.S=NF bad the water
 "It's not good, that water."
- LS: *kura-walija wankaj.*
 shit-PAUC bad
 "It's full of (cow) shit, no bad."
- RS: an *kura* yu-na gu *nyanawu* ting darrei.
 and shit 2SG.S-WANT.TO go you.know thing that.way
 "And there's shit too, you know, at that PLace that way." (I think referring to a tin house nearby)
- CA: *yakatayi* yu cunt.
 ouch 2SG cunt
 "Ouch you cunt."
- CA: wal *wankaj* ting *ngawa* darran.
 well bad thing water that.one
 "Well it's polluted water."

- CA: bulugi an oji-ku kura an kumpu jeya walyak-ta.
 cow and horse-DAT shit and piss there inside-LOC
 "There's horse and cow shit inside (the tin house)."
- RS: ngantipa wi bin gu bijin-bat ah weya Seven-Mile-kirri.
 1PL.EX 1PL.S NF go fishing-CONT ah wherePLACE.NAME-ALL
 "We went fishing, ah where, to Seven-Mile."
- RS: an wi bin grab-im yawu-waliya brom deya Samantha
 and 1PL.S NF grab-TRN fish-PAUC PREP there NAME
 yawu-ngku i bin turp im wartan-ta, kungulu-k.
 fish-ERG 3SG.S NF poke 3SG.O hand-LOC blood-INCHO
 "And we caught heaps of fish from there but a fish poked Samantha and on hand
 and made her bleed."
- RS: big-wan yawu dei bin grab-im jangkarni.
 big-nom fish 3PL.S NF grab-TRN big
 "They caught a big fish."
- VB: wen yawu turp ngaliwa i=m hard-im.
 when fish poke 1PL.INC 3SG.S=NF hurt-TRN
 "When a fish pokes you, it really hurts."
- RS: i=m hard-im laik abta dei bin put-im mud
 3SG.S=NF hurt-TRN like after 3PL.S NF put-TRN mud
 rab-im mud-jawung, na wartan-ta.
 rub-TRN mud-PROP DIS hand-LOC
 "It really hurts after that and they put mud, rubbed her hand with mud."

A4.2 FM057.C

- SO: *ngu-rna yuwa-ni kap-kula.*
 CAT-1SG.S put-PST.IM cup-LOC
 "I put it in the cup."
- SO: *jalyi walyak deya ai bin put-im yeah?*
 tea.bag inside there 1SG.SNF put-TRN yeah
 "The teabag's in there, I put it in, didn't I?"
- EO: *ngaja-ngku faya-ngku jiya-rnana.*
 LEST-2SG.O fire-ERG burn-PRS.PERF
 "The fire might burn you."
 (One of the children is trying to take the billy off the fire)
- CO: *nganayirla.*
 whats.his.NAME
 "What's his NAME."
- SO: *yamak.*
 slow
 "Carefully."
- CO: *nyila xxx nyila-kujarra.*
 that xxx that-DUAL
 "That two."
- SO: *nyila nya-ngka ah ah ah.*
 that look-IMP ah ah ah
 "That one look ah ah ah."
- SO: *nomo kuya-ny nyila ngaja-n jurlurl yuwa-rra*
 NEG thus-NOM that lest-2SG.S spill put-IMP

nalija-wu ngu-rla-yi.
 tea-DAT CAT-3DAT-1SG.S
 "Not that one, look out you might spill the water for the tea."
- EO: *hey wingkik jiya-rnana oh no.*
 hey strong.taste burn-PRS oh no
 "Hey the tea will taste too strong."
- CO: *wi gat no woda.*
 1PL.S have no water
 "We haven't got any water." (I think this is directed at me)

- SO: *ngawa jeya.*
water there
"There's water there."
- CO: *nyawa nyawa ngu-rna karrwa-wu kilik.*
that that CAT-1SG.S hold-DAT ready
"I'll hold this ready for tea."
- SO: *an nyila ngapulu nyanawu nyampa-warla-ngka murlukurn-ta*
and that milk you.know what-FOC-LOC bottle-LOC

ai bin bring-im.
1SG.S NF bring-TRN
"And that milk, you remember the one in the bottle, well I brought that one."
- EO: *yu gat tin opina?*
2SG.S have tin opener
"Have you got a tin opener." (Speaking to me)
- EO: *yu opin-im det tin.*
2SG.S open-TRN the tin
"You open the tin."
- SO: *ai jidan nyawa-ngka yurk-kula.*
1SG.S sit this-LOC tell.story-LOC
"I'll sit down here and tell a story."
- SO: *an dat ngapulu too nyila-ngka ngu-rna ka-ngani init?*
and the milk too that-LOC CAT-1SG.S take-PST.IM TAG
"And the milk too, I brought it there, didn't I."
- SO: *nyampa-warla tubala du-im nyila ngu-lu wirl-lu xxx kataj*
what-FOC 3DU.S do-TRN that CAT-3PL.S wheel-ERG xxx cut

tubala.
3DU.O
"What are those two doing? The wheel might hit them."
(Two of the kids are swinging the rear spare type which is attached to a hinge)
- SO: *tubala yingin-karra.*
3DU.S shake-CONT
"Those two are shaking it."

- SO: *ngu-rna yuwa-nana ngapulu-ma jarrei.*
 CAT-1SG.S put-PRS milk-DIS that.way
 "I put the milk over there."
- EO: *Kawurla yurrk ma-nyja nyawa-ngka ngu-rnalu karri-nyana*
 NICK.NAME tell.story talk-IMP this-LOC CAT-1PL.EX be-PRS
 "Kawurla tell them a story, and we'll stay here."
- EO: *Kawurla jarrakap ma-nyja-rla nyila-wu karu-wu Yikaka-wu*
 NICK.NAME talk talk-IMP-3DAT that-DAT child-DAT NAME-DAT

yu yurrk la=im
 2SG.S tell.story OBL=3SG.IO
 "Kawurla talk to him, that kid Yikaka. Tell a story to him."
- SO: *ngayu-ma ai don nou ai xxx yapakayi ngu-rna*
 1SG-DIS 1SG.S NEG know 1SG.S xxx small CAT-1SG.S

karri-nya nyawa-rni na
 be-PST this-ONLY DIS
 "Me, I don't know any stories, I was only little when I lived here."
- EO: *nyawa karu yu yurrk la=im nyanawu na.*
 this child 2SG tell.story OBL=3SG.O you.know DIS
 "This kid, you tell a story to him, about the times you and I remember."
- SO: *yu nou nyawa karnti-ka-ma xxx nyawa-ngka-ma karnti-ma.*
 2SG.S know this tree-LOC-DIS xxx this-LOC-DIS tree-DIS
 "You know this here in the tree." (referring to the swing in the tree)
- SO: *nyawa-ngka karnti-ka ngayu ai bin top pleibat-ma yapakayi*
 this-LOC tree-LOC 1SG 1SG.S NF stop play-DIS small

ai don nou ngayu ai bin top.
 1SG.S NEG know 1SG 1SG.S NF stop
 "Here in the tree I played when I was little."
- SO: *ai bin jidan ngayu-ma yapakayi nyuntu-marraj an Frances-ma.*
 1SG.S NF sit 1SG-DIS small 2SG-COMP and NAME-DIS
 "I lived here when I was little like you, and Frances too."

SO: Frances bin top *jangkarni-piya ngayu* ai bin top
 NAME NF stop big-little.bit 1SG 1SG.S NF stop

yapakayi.

small

"Frances was a little bit bigger than me when we were living here, and I was just little."

SO: *nyawa-ngka juwingjuwing-la nganta ngayu-ma* bin tok "*ngayu* na
 this-LOC swing-LOC DOUBT 1SG-DIS NF talk 1SG DIS

ngayu na." "no *nganta*", *Yikaka* bin tok im
 1SG DIS no DOUBT NICK.NAME NF talk 3SG

til *yapakayi.*

still small

"Here on the swing, I said "My turn now". "I don't think so" (repeating what Yikaka said) Yikaka said though he's still little.

SO: "*ngayu jangkarni* an im *jangkarni* dij *karnti-ka.*"
 1SG big and 3SG big this tree-LOC
 " 'I'm big and the tree's big.' (said Frances)."

SO: "yu mait baldan ola *wumara nyila-ngka jangkarni-ngka-ma*"
 2SG.S mightfall all rock that-LOC big-LOC-DIS

binij ngu-rna wani-nya.

finishCAT-1SG.S fall-PST

" 'You might fall down there onto the big rocks,' (said Frances) and that's it, I fell down!"

SO: "ah ah" *nganta*, Frances bin tok la=mi
 "ah ah doubt NAME NF talk OBL=1SG.O
 " 'Ah ah', Frances said to me."

SO: *mor-kari* yet.
 more-ANOTHER yet
 "Wait there's more yet."

A4.3 FM041.D

nyawa-ma tu karu baisikul-jawung
 this-DIS two child bicycle-PROP
 "These two kids have bicycles."

nyawa-ma gel-wan i garram nyanuny baisikul yapakayi
 this-DIS girl-NMZ 3SG.S has 3SG.DAT bicycle small
 "This girl, well she has her small bicycle."

an det *boi-wan too i garram baisikul igin*
 and the boy-NMZ too 3SG.S has bicycle as.well

tubala bin gu rait
 3du NF go right
 "And the boy also has a bicycle, and those two went that way."

bat det *karu boi-wan i neba luk det karnti roud-ta*
 but the child boy-NMZ 3SG.S never look the tree round-LOC
 "But the boy, he didn't see the tree around the corner."

i bin baldan wartiti
 3SG.S NF fall poor.thing
 "He fell off his bike, poor thing."

i bin baldan
 3SG.S NF fall
 "He fell off."

i bin lungkarra na
 3SG.S NF cry DIS
 "And then he cried."

nyanuny kapuku bin kom la=im "yu rait baba
 3SG.DAT sister NF come OBL.3SG.O 2SG alright brother

wat rong, im=in tok la=im
 what wrong 3SG.S=PST talk OBL.3SG.O
 "His sister came along to him. 'Are you ok Brother? What's wrong,' she said to him."

"ai bin baldan *kapuku*" i bin tok det *karu*
 1SG.S NF fall sister 3SG.S NF talk the child
 " 'I fell off my bike Sister,' the kid said."

i bin teik-im jarrpip najan kapuku-ngku-ma nganta ankaj
 3SG.S NF take-TRN carry another sister-ERG-DIS DOUBT poor.thing
 "Another of his sisters (tried to) carried him away, poor thing."

an i bin tok la=im kuya
 and 3SG.S NF talk OBL.3SG.O thus
 "And she said to him like this:"

"yu liwart hiya baba yarti-ngka yu liwart yarti-ngka
 2SG wait here brother shade-LOC 2SG wait shade-LOC

ai-l kombek igin ai-l gu ged-im help"
 1SG.S-IF come.back again 1SG.S-IF go get-TRN help
 " 'You wait here in the shade Brother, you wait in the shade. I'll return. I've got to get some help'."

i bin gon
 3SG.S NF go
 "She went."

jurru na det karnti-walija-ngka jurru i bin gon
 through DIS the tree-PAUC-LOC through 3SG.S NF go
 "Through the bush, she went "

i bin gon kuya im=in partaj nyawa na brij-ta
 3SG.S NF go this 3SG.S=PST climb this DIS bridge-LOC
 "She keep going, climbing over the bridge."

i bin gon hawuj nya
 3SG.S NF go home DIS
 "She went home now."

"Mummy Daddy Baba-ngku baldan karnti-ngka" i bin tok
 Mummy Daddy Brother-ERG fall tree-LOC 3SG.S NF talk

bo dem karu-walija an nyanuny Mummy an Daddy-yu
 PREP those kid-PAUC and 3SG.DAT Mother and Father-DAT

nyanuny Jaju-yu an det karu deya baisikul-ta
 3SG.DAT MM-DAT and the kid there bicycle-ta
 " 'Mummy and Daddy, Brother crashed into a tree,' she said to those kids and her Mother and Father and her grandmother, and the kid is there waiting by the bicycle."

dei bin gon motika-yawung na nyanuny Daddy an nyanuny
 3SG.S NF go car-PROP DIS 3SG.DAT Father and 3SG.DAT

Mummy dei bin gon motika-yawung
 Mother 3PL.S NF go car-PROP

"They went with the car. Her Father and his Mother went with the car. "

im=in hepi na
 3SG.S=PST happy DIS

"And he was happy now. "

det karu wen i bin baldan wal i bin
 the kid when 3SG.S NF fall well 3SG.S NF

lungkarra an nyanuny baisikul deya said-ta
 cry and 3SG.DAT bicycle there side-LOC

"That child who fell off, well he cried and his bicycle stands against the tree."

dei bin put-im partaj nya motika-ngka nyanuny mami-ngku
 3PL.S NF put-TRN climb.up DIS motika-LOC 3SG.DAT Mummy-ERG

"They put the boy up in the car, particularly his Mother."

i bin lib-im nyanuny baisikul-ma bihain karnti-ngka
 3SG.S NF leave-TRN 3SG.DAT bicycle-DIS behind tree-LOC

"He left his bicycle behind, leaning against the tree."

dei bin teik-im im hawuj nah hospel-jirri dei bin
 3PL.S NF take-TRN 3SG.Ohome nah hospital-ALL 3PL.S NF

teik-im im hospel-jirri det karu-ma
 take-TRN 3SG.O hospital-ALL the child-DIS

"They took him home, no they took the child to the hospital."

A4.4 FM017.D

nyawa-ma wan *karu* bin *pleibat* pak-*ta* deya *warlaku-yawung-ma*.
 this-DIS a child NF play park-LOC there dog-PROP-DIS
 "This kid was playing with his dog in the park."

deya *dei* bin *pleibat*.
 there 3PL.S NF play
 "There they played."

i bin *tok-in-karra* la=*im*
 3PL.S NF talk-CONT-CONT OBL=3SG.O

"*kamon warlaku partaj ngayiny leg-ta*".
 come.one dog climb 1SG.DAT leg-LOC
 "He was talking to him saying, 'Come on doggie climb up on my leg!'"

"*ngali pleibat nyawa-ngka*".
 1PLINC play this-LOC
 " 'You and me can play here!'"

"*ngayiny pak-ta atsaid*".
 1SG.DAT park-LOC outside
 " 'Outside in my park!'"

"*nyununy own pak nyununy hawuj-ta atsaid*".
 2SG.DAT own park 2SG.DAT house-LOC outside
 " 'And outside in your own park!'"

wan *mumpa* bin *kom* deya *yapart* *nganta*.
 a monster NF come there sneak doubt
 "A monster came and sneaked up on them."

i bin *ged-im* *nyanuny* *naja* *papa* *juwingjuwing-nginyi*
 3PL.S NF get-TRN 3SG.DAT another B swing-ABL
 "The boy got his other brother from the swing."

"*kamon ngali gu mami an na teik-im-bek warlaku*".
 come.one 1PLINC go M and DIS take-TRN-back dog
 " 'Come one, you and me will go back to Mummy and take the dog!'"

i bin *luk jarrei-ma* *karlarra-k*.
 3PL.S NF look that.way-DIS west-ALL
 "He looked that way towards the west."

i bin luk det warlaku missing.
 3PL.S NF look the dog missing
 "He saw that the dog was missing."

det kaya bin teik-im im.
 the monster NF take-TRN 3PL.O
 "The monster had taken the dog."

i bin jarrpip im det kaya-ngku
 3PL.S NF carry 3PL.O the monster-ERG
 "He had carried him off, that monster."

ged-im na ged-im na warlaku trai an meik-im kwait
 get-TRN DIS get-TRN DIS dog try and make-TRN quiet

jeya nojing.
 there nothing
 "It took off with him and tried to make him quieten down but to no avail."

det warlaku bin lungkarra bo nyanuny boswan det warlaku
 the dog NF cry PREP 3SG.DAT owner the dog

nyanuny owner of det warlaku.
 3SG.DAT owner of the dog
 "Instead the dog cried out for its owner."

det mob bin jing-in-at maja dota an san bin
 the group NF call-CONT-out M D and S NF

jing-in-at bo warlaku nyanuny kamparra-rni.
 call-CONT-out PREP dog 3SG.DAT front-ONLY

"The group of them including the mother, daughter and son called out to his dog."

"weya ngayiny warlaku warta mumpa-ngku bin jawurra im."
 where 1SG.DAT dog goodness monster-ERG NF steal 3PL.O
 " 'Where's my dog, goodness the monster stole him!.'"

den dei bin jayijayi na det karu an nyanuny
 then 3PL.S NF chase DIS the child and 3SG.DAT

ngamayi bin ged-im xxx.
 mother NF get-TRN ??

So they chased the monster now. The child and his mother tried to get the dog.

kayikayi-karra det *kaya*.
 chase-CONT the monster
 "They chased the monster."

"wen det *kaya* bin *makin* wat wi garra ged
 when the monster NF sleep what 1PL.S FUT get

det *warlaku* na"
 the dog DIS
 " 'When the monster goes to sleep, we'll get the dog'."

stil dei bin bolou-im det *kaya*.
 still 3PL.S NF follow-TRN the monster
 "Still they kept following the monster."

nyila bin top dei garra top naitaim.
 that NF stop 3PL.S FUT stop night.time
 "That one stopped, and then they'll all stop for the night."

kaya bin *makin* pikitabat.
 monster NF sleep forget.about
 "The monster went to sleep and forgot about the dog."

i bin jas gon ged-im *nyanuny* mami-*ngku*
 3PL.S NF just go get-TRN 3SG.DAT M-ERG
 "Then his mother went and got the dog."

teik-im-bek hawuj
 take-TRN-back house
 "and took it back to the house. "

det *gel-ma* i bin binij na *pulayij* *nyanuny* *warlaku-yu*.
 the girl-DIS 3PL.S NF finish DIS happy 3SG.DAT dog-DAT
 "The girl was happy for that dog."

"*ngayiny* *warlaku* hiya xxx det *kaya* bin *jawurra* im".
 1SG.DAT dog here ?? the monster NF steal 3SG.O
 " 'My dog is back here even though the monster stole him'."

A4.5 FHM141

karu jintaku-ngku i bin hab-im pet ngakparn an warlaku.
 child one-ERG 3SG.S NF have-TRN pet frog and dog
 "One kid had a pet frog and dog."

karu an det warlaku bin makin.
 child and the dog NF sleep
 "The child and the dog slept."

kuya-ngka det ngakparn-ma i bin ran-awei.
 thus-LOC the frog-DIS 3SG NF run-away
 "Then the frog ran-away."

irli-bala det tu bin ged-ap.
 early-NOM the two NF get-up
 "Early the next morning the two of them got up."

dei bin luk la=im nojing.
 3PL.n NF look OBL=3SG.IO nothing
 "They looked for the frog but they couldn't find it."

det karu-ngku i bin luk but-ta, warlaku-ngku det botl-ta
 the child-ERG 3SG NF look boot-LOC dog-ERG the bottle-LOC

bat nojing.
but nothing
 "The kid looked in the boot, and the dog looked in the bottle, but they couldn't find it."

karu bin jing-in-at an warlaku, no ansa nojing.
 child NF sing-CONT-out and dog no answer nothing
 "The kid called out and the dog as well but there was no reply."

warlaku bin tipart kanyjurra-k windou-nginyi,
 dog NF jump down-ALL window-ABL

karu-ngku i bin karrap
 child-ERG 3SG.S NF look.at
 "The dog jumped to the ground from the window as the kid watched on."

karu bin, gon la=im ngumayila.
 child NF go OBL=3SG.IO back
 "The kid went to the dog from behind."

warlaku an *karu* dei bin gon jing-in-at bo det *ngakparn*.
 dog and child 3PL.S NF go sing-CONT-out PREP the frog
 "The dog and the kid went along calling for the frog."

det *karu-ngku* i=m faind-im im *jimpiri*.
 the child-ERG 3SG.S=NF find-TRN 3SG.O hole
 "The kid found a hole."

det *jimpiri-ngka-ma* i bin *jik* mawujimawuji *yapakayi*.
 the hole-LOC-DIS 3SG.S NF emerge mouse small
 "Out of the hole emerged a little mouse."

det *karu-ngku* i bin faind-im, i bin *paraj* *jimpiri*
 the child-ERG 3SG.S NF find-TRN 3SG.S NF find hole

najan *karnti-ngka*.
 another tree-LOC
 "The kid found a hole in another tree."

nyila-ngka i bin top *mukmuk*.
 that-LOC 3SG.S NF stop owl
 "There lived an owl."

det *karu-ngku* i=m rekin det *mukmuk* bin *kayikayi* im,
 the child-ERG 3SG.S=NF reckon the owl NF chase 3SG.O

i bin gon *partaj* *wumara-ngka*.
 3SG.S NF go climb rock-LOC
 "The child thought that the owl was chasing him so he climbed up a rock."

i bin lin la det *karnti*, i=m rekin im *karnti*.
 3SG.S NF lean PREP the tree 3SG.S=NF reckon 3SG.O tree
 "He leant against the tree, at least he thought it was a tree."

nyila-ma i bin top reindiya.
 that-DIS 3SG NF stop reindeer
 "Actually it was a reindeer."

det reindiya bin *rarraaj* gat det *karu ngarlaka-ngka*.
 the reindeer NF run PREP the child head-LOC
 "The reindeer ran with the child on its neck."

rarraaj i bin *jak* tubala *warlaku* an *karu* det *kujarra-pa-rni*
 run 3SG.S NF fall 3DU.S dog and child the two-PA-ONLY

det tubala bin baldan ngawa-ngka jirrupu, ngawa-ngkirri.
 the 3DU.S NF fall water-LOC dive water-ALL
 "Running the reindeer threw the pair of them, dog and child. They fell diving into the water."

tubala bin ged-ap.
 3DU.S NF get-up
 "The two of them got up."

det warlaku bin top la=im ngarlaka-ngka karu-ngka.
 the dog NF stop OBL=3SG.O head-LOC child-LOC
 "The dog stayed on the kid's head."

tubala bin faind-im karnti drai-wan.
 3DU.S NF find-TRN tree dry-NOM
 "The two of them found a dry log."

det tu bin partaj nyila-ngka-ma.
 the two NF climb that-LOC-DIS
 "They climbed over the log."

deya tubala bin faind-im det ngakparn an nyanuny waip.
 there 3DU.S NF find-TRN the frog and 3SG.DAT wife
 "There the two of them found the frog and his wife."

det ngakparn-tu i bin hab-im dem jintaku ngakparn
 the frog-ERG 3SG NF have-TRN 3PL.O one frog

gel-wan-tu i bin hab-im jem karu-walija, eit karu.
 girl-NOM-ERG 3SG.S NF have-TRN 3PL.O child-PAUC eight child
 "The frog and his wife had lots of children, eight children."

i bin gon pas-im-bek im det ngakparn, teik-im-bek im
 3SG.S NF go pass-TRN-back 3SG.O the frog take-TRN-back 3SG.O

hawuj, an i bin tok bo jem "marntaj na,
 house and 3SG.S NF talk PREP 3PL.O ok DIS

teik-im-bek im nyawa-ma".
 take-TRN-back 3SG.O this-DIS
 "He passed back a frog to take back home, and the kid said to them, "OK then I'll take home this one."

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nyawa-ma det *ngakparn* *karu* an *warlaku*.
 this-DIS the frog child and dog
 "Here is a frog, a child and a dog."

nyawa-ma *nyanuny* det *karu-yu* *hawuj* *deya* na det *karu*
 this-DIS 3SG.DAT the child-DAT house there DIS the child

ngakparn *warlaku* an *nyanuny* bed.
 frog dog and 3SG.DAT bed
 "This one is the boy's house, and the boy, frog, dog and his bed."

det *karu* i=m *makin* *warlaku* *makin*, *ngakparn-ma* i=m kom-at
 the child 3SG=NF sleep dog sleep frog-DIS 3SG=NF come-out

na *garra* gon *lib-im* dem *ran-awei*.
 DIS FUT go leave-TRN 3PL.O run-away
 "The child sleeps and the dog as well. The frog got out of the bottle and it's going to leave them and run away."

det *warlaku* bin *ged-ap* an det *karu* dei bin
 the dog NF get-up and the child 3PL NF

karrap *kuya-ny* no *ngakparn* *ngakparn* bin gon.
 look.at thus-NOM NEG frog frog NF go
 "The dog got up and the child as well and they looked at the bottle but there was no frog. The frog had gone."

i bin *warlakap* *nyanuny* but-*ta* *nyila-ngku* *karu-ngku*,
 3SG.S NF look-around 3SG.DAT boot-LOC that-ERG child-ERG

det *warlaku-ngku* i=m *warlakap* *nyila-ngka* botl-*ta*.
 the dog-ERG 3SG=NF look.around that-LOC bottle-LOC
 "He looked for it in the boot, that kid. The dog looked in that bottle."

abta-ma i=m gon *autsaid* *windou-nginyi* *jing-in-at*
 after-DIS 3SG=NF go outside window-ABL sing-CONT-out

bo det *ngakparn*, *warlaku* *jeya* botl-*jawung* *ngarlaka-ngka*.
 PREP the frog dog there bottle-prop head-LOC
 "After that, he goes outside of the window calling for the frog. The dog is there with a bottle on its head."

binij warlaku-ngku i bin baldan warlaku baldan kanyjurra-k
 finish dog-ERG 3SG NF fall dog fall down-ALL

windou-nginyi, det karu i=m karrap im baldan.
 window-ABL the child 3SG=NF look.at 3SG.O fall
 "That's it, the dog fell out of the window, and the child watched it fall down."

karu na i bin kom kanyjurra-k-ma grab-im im
 child DIS 3SG NF come down-ALL-DIS grab-TRN 3SG.O

warlaku nyila.
 dog that
 "The kid now came down and grabbed that dog."

det karu-ngku i=m jing-in-at det ngakparn-tu
 the child-ERG 3SG=NF call-CONT-out the frog-DAT

warlaku deya i=m rungap-karra igin.
 dog there 3SG=NF bark-CONT too
 "The kid called out for the frog, and the dog there barked as well."

det karu i=m faind-im jimpiri
 the child 3SG=NF find-TRN hole

i=m karrap kuya warlaku-ngku bi
 3SG=NF look.at thus dog bee
 "The child finds a hole and he looks down it like this. In the meantime the dog barks at the bees."

bi-walija na tri-ngka kankula.
 bee-PAUC DIS tree-LOC up
 "The bees are up in the tree."

nyila-nginyi-ma i=m faind-im mawujimawuji jik nyila
 that-ABL-DIS 3SG=NF find-TRN mouse emerge that

hol-nginyi-ma jimpiri-nginyi.
 hole-ABL-DIS hole-ABL-DIS
 "After that he finds a mouse emerging from that hole."

jitji-ngka na i bin bait-im im nyila-ngku mawujimawuji-ngku.
 nose-LOC DIS 3SG NF bite-TRN 3SG.O that-ERG mouse-ERG
 "That mouse bit him on the nose."

nyila warlaku i=m gon kankula karnti-ngka nyila bi-walija-yu.
 that dog 3SG=NF go up tree-LOC that bee-PAUC-DAT
 "That dog then goes up the tree to the bees."

nyila warlaku-ma i=m partaj na binij i bin jak
 that dog-DIS 3SG=NF climb DIS finish 3SG.S NF fall

det *bi-yu ting.*
 the bee-DAT thing

"That dog climbed the tree, bang, the beehive fell down."

det *karu i=m gon partaj karnti-ngka*
 the child 3SG=NF go climb tree-LOC

i=m faind-im jangkarni jimpiri
 3SG=NF find-TRN big hole

"The kid then climbs the tree and finds a big hole in the side of it."

det *karu bin baldan binij, mukmuk bin jik nyila*
 the child NF fall finish owl NF emerge that

nyanuny karnti-nginyi
 3SG.DAT tree-ABL

"The child fell from the tree because an owl emerged from his treehouse."

warlaku-ma bi-walija-ngku dei jayijayi-karra im.
 dog-DIS bee-PAUC-ERG 3PL.S chase-CONT 3SG.O
 "The bees chased the dog."

det *mukmuk-tu i bin jayijayi im* det *karu i=m*
 the owl-ERG 3SG.S NF chase 3SG.O the child 3SG.S=NF

gon *partaj na nyila-ngka wumara-ngka.*
 go climb DIS that-LOC rock-LOC

"The owl chased the boy, and so he climbed a rock."

det *mukmuk i=m karrap tri-nginyi* det *karu i=m partaj*
 the owl 3SG.S=NF look.at tree-ABL the child 3SG.S=NF climb

kankula wumara-ngka jing-in-at-karra bo det ngakparn.
 up rock-LOC call-CONT-out PREP the frog

"The owl watched the boy from the tree, and he climbed up the rock calling out for the frog."

warlaku i=m jeya *kanyjurra-ngka*.
 dog 3SG.S=NF there down-LOC
 "The dog's there on the ground."

i=m *partaj nyila-ma* *reindiya-yu* horn-*ta*.
 3SG.S=NF climb that-DIS reindeer-DAT horn-LOC
 "The boy climbed up on that reindeer's horns."

mukmuk i=m til top jeya *kankula karnti-ngka*.
 owl 3SG.S=NF still stop there up tree-LOC
 "The owl stays up in the tree."

nyila-nginyi-ma det *reindiya* i bin *kutij na kankula* binij
 that-ABL-DIS the reindeer 3SG.S NF stand DIS up finish

nyila karu i=m top *kankula nyanuny* horn-*ta*.
 that child 3SG.S=NF stop up 3SG.DAT horn-LOC
 "After that the reindeer stood up, but too late that kid was stuck in his horns."

rarraaj na i bin *teik-im* det *karu-ma* an det
 run DIS 3SG.S NF take-TRN the child-DIS and the

warlaku i=m jeya igin *rarraaj* *reindiya-ngku-ma*
 dog 3SG.S=NF there too run reindeer-ERG

im=in *teik-im* im.
 3SG.S-PST take-TRN 3SG.O
 "The reindeer ran off taking the child, and the dog he's there running too. The reindeer takes the child."

det *reindiya* i bin binij *put-im* breik rait *deya an* det *karu*
 the reindeer 3SG.S NF finish put-TRN break right there and the child

an det *warlaku* jei bin *baldan kanyjurra-k ngawa-ngka*.
 and the dog 3PL.S NF fall down-ALL water-LOC
 "The reindeer came to an abrupt halt and the child and dog fell down into the water."

dei bin *baldan ngawa-ngkirri kanyjurra*.
 3PL.S NF fall water-ALL down
 "They fell down into the water."

warlaku-ma i=m top la=i *kankula ngarlaka-ngka karu-yu*,
 dog-DIS 3SG.S=NF stop OBL=3SG.IO up head-LOC child-DAT

nyila karu i=m top jidan ngawa-ngka kanyjurra.
 that child 3SG.S=NF stop sit water-LOC down
 "The dog stayed up on the child's head while the child stayed sitting in the water."

det *karu i=m tok la=im nyila warlaku yamak.*
 the child 3SG.S=NF talk OBL=3SG.IO that dog quiet
 "The child told the dog to go quietly."

dei gon *partaj yamak, warlaku karu partaj kankula*
 3PL.S go climb quiet dog child climb up

nyila karnti-ngka.
 that tree-LOC
 "They climbed up and over that log quietly."

nyila-ngku warlaku-ngku an karu-ngku nyila ngakparn dei bin faind-im
 that-ERG dog-ERG and child-ERG that frog 3PL.S NF find-TRN

ngakparn-kujarra.
 frog-DUAL
 "That dog and the child found the frog and two others."

det *karu an warlaku nyila dei faind-im kuya-ma ngakparn*
 the child and dog that 3PL.S find-TRN thus-DIS frog

nyila-ma nyanuny femli-yawung na.
 that-DIS 3SG.DAT family-PROP DIS
 "The child and the dog find that frog with his family."

i=m gu-bek gat nyanuny ngakparn na an det warlaku
 3SG.S=NF go-back with 3SG.DAT frog DIS and the dog

an det *karu-ma*
 and the child-DIS
 "He went back with his frog, and the dog, that child did."

dei tata na bo dem naja-mob *kuya-ny-ma.*
 3PL.S wave.goodbye DIS PREP 3PL.O another-MOB thus-NOM-DIS
 "They wave goodbye to that lot now."

APPENDIX 5. STATISTICAL OUTPUT

Possessive constructions §6.4.2 Multilevel logistic regression analysis Dependent variable: Dative marking

Random effects:

Groups	Name	Variance	Std. Dev.
Speakers	(Intercept)	0.73346	0.85642

Number of observations: 1447

Groups: Speakers, 39

Estimated scale (compare to 1) 1.009372

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.3052	1.1316	-1.153	0.2487
AgeC	-0.5945	0.5836	-1.019	0.3084
AgeD	-2.3907	0.6043	-3.956	7.62e-05 ***
GenreE	2.2283	0.4043	5.512	3.55e-08 ***
GenreN	0.6093	0.3374	1.806	0.0709 .
Language_StemK	-2.9943	0.2782	-10.764	< 2e-16 ***
Language_StemN	-0.9870	0.6292	-1.569	0.1167
Kinship	0.7470	0.3388	2.205	0.0275 *
Body_part	2.3134	0.3396	6.813	9.56e-12 ***
Pronoun	-0.1929	0.3659	-0.527	0.5980

Significance. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Topological relations §7.4.2
Multilevel logistic regression analysis
Dependent variable: Locative preposition

Random effects:

Groups	Name	Variance	Std.Dev.
Speakers	(Intercept)	1.5798	1.2569

Number of observations: 1874

Groups: Speakers, 40

Estimated scale (compare to 1) 1.037856

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.42647	0.54270	-2.628	0.008577 **
GenreE	0.06414	0.25489	0.252	0.801319
GenreN	-0.99281	0.29775	-3.334	0.000855 ***
Language_StemK	1.34253	0.24639	5.449	5.07e-08 ***
Language_StemN	2.20141	0.42725	5.152	2.57e-07 ***
AGEC	-2.23704	0.57278	-3.906	9.40e-05 ***
AGED	-2.02193	0.64550	-3.132	0.001734 **
FrontedY	-1.38430	0.36504	-3.792	0.000149 ***
DeterminerY	3.74640	0.34293	10.925	< 2e-16 ***
MODIFIERY	-1.29084	0.31450	-4.104	4.05e-05 ***
RAIT_LAY	6.93175	1.15379	6.008	1.88e-09 ***
VERBY	0.14942	0.26219	0.570	0.568756

Significance. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Argument marking §9.5
Multilevel logistic regression analysis
Dependent variable: Ergative marker

Random effects:

Groups	Name	Variance	Std.Dev.
Speakers	(Intercept)	0.24482	0.49479

Number of observations: 1917

Groups: Speakers, 39

Estimated scale (compare to 1) 1.054021

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.14548	0.28429	-0.512	0.60883
AgeC	0.34955	0.25059	1.395	0.16305
AgeD	0.63923	0.34555	1.850	0.06433 .
PostVY	2.10849	0.34738	6.070	1.28e-09 ***
AAnimacyI	0.77250	0.22419	3.446	0.00057 ***
GenreE	0.03526	0.21685	0.163	0.87083
GenreN	-0.15231	0.20117	-0.757	0.44896
ALanguageK	0.15383	0.12999	1.183	0.23665
ALanguageN	-0.11042	0.22940	-0.481	0.63029
Coref_pronounY	1.73438	0.13019	13.321	< 2e-16 ***
PotentialY	-1.58942	0.31778	-5.002	5.69e-07 ***
ContinuativeY	-0.43984	0.14729	-2.986	0.00283 **
OAnimacyI	-0.03633	0.12312	-0.295	0.76792
OOvertY	-0.24730	0.15472	-1.598	0.10997

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

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