

Light Warlpiri: A New Language*

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1. Introduction

In the Warlpiri community of Lajamanu, in the Northern Territory of Australia, children and young adults, less than about 30 years old, speak in a way which systematically combines elements of Warlpiri (a Pama-Nyungan language), Kriol (an English-based creole) and English, as in examples (1) and (2).

- (1) **uuju**-*ng* i-**m** hab-um *ngapa*
horse-ERG 3sg-NFUT have-TR water
The horse is having water.

- (2) yu-**m** *ngurrju* -*nyayirni*
2sg-NFUT good very
You did very well/You were very good.

In the examples, elements drawn from *Warlpiri* are in *italics*, those from **Aboriginal English** or **Kriol** are in **bold print** and those from Standard Australian English are in plain text. The auxiliary cluster is underlined. The examples are from adults in their early twenties.

Older adults call this way of talking 'Light Warlpiri' (LW).¹ LW draws most verbs and verbal morphology from Kriol, nouns from Warlpiri and English, and nominal morphology from Warlpiri. It has an innovative auxiliary paradigm, which is derived from Warlpiri and Kriol auxiliaries.

Languages spoken in Lajamanu are Warlpiri, Aboriginal English and Standard Australian English, and LW. Older Warlpiri speakers, over approximately 30 years old, typically code-mix and borrow from Kriol and English when speaking Warlpiri. They also code-switch between Warlpiri and English or Kriol. People in Lajamanu are

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¹ Older speakers of Warlpiri generally have passive control of LW, but also say that they sometimes cannot understand the children when the children are speaking to each other.

not speakers of Kriol, but elements that could be identified as Kriol (or Aboriginal English) appear in their Warlpiri through borrowing and code-mixing. The code-mixing of older Warlpiri speakers both resembles and differs from the combination of elements in LW. A specific difference is that, when code-mixing, older Warlpiri speakers do not produce the LW auxiliary system, which is an innovation on the part of the younger generation. The use of this system, described in Section 4, is taken as diagnostic of LW.

LW developed as an in-group language, through Warlpiri speakers speaking to each other and code-mixing between Warlpiri and Kriol or English. It has not undergone processes of pidginization and creolization.² Nor is LW an interlanguage, because LW did not arise from the need to learn a language other than Warlpiri for communication with a non-Warlpiri speaking group. Nor did LW come from Kriol or English speakers who needed to learn Warlpiri. LW arose among a group of Warlpiri speakers. They typically code-mixed between Warlpiri and Kriol or English, and their code-mixing has conventionalized into a new language, which is now learned by children as one of their two first languages.³

My analysis of LW is based on approximately 90 hours of audio and video tape recordings of children's and young adults' speech, between 2001 and 2004, including both spontaneous and elicited production data.⁴

1.1. Organization of Paper

In this paper I describe LW and demonstrate that it is a new language. Lajamanu children learn both LW and Warlpiri. They target LW as the language they produce first and as the language of their everyday interactions. They speak LW with each other and with older adults, even if older adults speak to them in Warlpiri. LW is spoken only with people from Lajamanu community. Both adults and children think of it as a kind of Warlpiri.

² In a sociolinguistic context of extreme social disruption, when members of a newly-emerged community have an urgent need for communication with each other, speakers of several different languages develop a more restricted language, a pidgin, for communication with each other in certain public domains, but speak their respective first languages in their domestic domains. In creolization the pidgin develops and becomes the first language of the next generation, the creole (see, for example, Harris 1991, 1993; Mulhauser 1991). The debate about the genesis and typology of creoles is not addressed by this paper.

³ McConvell *et al.* (in progress) argue that LW is a Mixed Language.

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In Section 2 I define relevant language names. Section 3 describes LW phonology and phonotactics. Section 4 discusses LW grammatical functions, and Section 5 describes LW discourse markers. Section 6 presents some examples of older people's code-mixing, code-switching and borrowing, and contrasts these with LW. In Section 7 I argue that LW is not code-mixing or code-switching, or one language with extreme borrowing, but that it is a new language.

2. Definitions of Language Names

2.1. Warlpiri

Warlpiri is essentially Warlpiri as documented in the literature (Hale 1973; Laughren *et al.* 1996; Nash 1986; Simpson 1991), with some variation found in Lajamanu. The descriptions in the literature are mainly based on varieties spoken in the communities of Yuendumu and Willowra, approximately 600 kilometres south of Lajamanu. Lajamanu Warlpiri shows some variation, especially among speakers under 60 years old. One variation is allomorphic simplification of ergative and locative suffixes. In the literature on Warlpiri, velar initial forms occur on disyllabic word stems: *-ngki*, *-ngku*, (ergative) *-ngka* (locative), and coronal initial forms occur on longer stems: *-rli*, *-rlu* (ergative), *-rla* (locative). In Lajamanu Warlpiri, spoken by adults under about 60 years old, both forms occur on longer word stems.⁵ The second variation is the deletion of a velar stop from the velar form of ergative and locative clitics, so that they become *-ngi*, *-ngu*, *-nga*.⁶ Again, both forms are used by Lajamanu adult speakers, especially those under 60 years old.

2.2. Kriol

Kriol is the English-based creole spoken as a common language with local variation by indigenous people across northern Australia. For Kriol data I draw on Fitzroy Valley Kriol (Hudson 1983) and Ngukurr-Bamyili Kriol (Sandefur 1979).

2.3. English and Aboriginal English

English refers to Standard Australian English. Aboriginal English (AE) is a variety of English. It contains features from traditional Australian languages and/or from Kriol (Malcolm 1991), such as phonology, syntax and lexical items. The English of people in Lajamanu often shows features of AE. These include, for example, *bin* as a past tense marker, a transitive marker *-im* on transitive verbs, *one* as the indefinite article and zero copula. AE is used by Warlpiri to speak to indigenous people from non-Warlpiri communities, and to non-indigenous people.

⁵ In standard Warlpiri the lateral form is used on some lexically marked disyllabic determiners, e.g. *yali* (that-there), *nyampu* (this/here), *yinya* (that/there), *nyiya* (what).

⁶ Velar stop deletion is also a feature of Eastern Warlpiri (Simpson 1985).

2.4. Kriol and AE

Both Kriol and Aboriginal English vary along geographic lines, incorporating words and structures derived from and inspired by the traditional languages of the local area. They also vary as to how many features they incorporate from standard English. [For a discussion of distinctions between Aboriginal English and creoles see, for example, Malcolm (1991).]

Kriol is English-based, and AE contains morphemes and words from Kriol, so there is considerable phonological, syntactic and lexical overlap between AE and Kriol. For example, the elements listed above for AE also occur in Kriol. It is often not possible to distinguish whether an element in LW is drawn from AE or Kriol. Since Lajamanu people are influenced by both AE and Kriol, I will use AE/Kriol to indicate that the source of the element could be either AE or Kriol, or both.

It is difficult to identify which processes and which source languages lead to some features in LW. This is because some features in AE/Kriol are already the result of language contact processes between English and traditional Australian languages, for example, relexification (Muysken 2000). I take the view that LW speakers are influenced directly by features of AE/Kriol and also by language contact processes involving English and Warlpiri. The processes and the outcomes often resemble each other and strengthen the motivation for a feature to occur in LW.

Following Muysken (2000), I use the term 'code-switching' for when the language used changes inter-sententially in a single speech event, and the term 'code-mixing' for instances where lexical and grammatical elements from two or more languages or varieties appear within a single sentence.

3. LW: Phonology and Phonotactics

LW phonology is drawn from Warlpiri, Kriol and English. In Kriol, English-derived words take on the phonology of traditional Australian languages (Sandefur 1979), so there is considerable overlap in the phonological inventories of Warlpiri and Kriol. Some LW words, such as *bugi* (wash, 'bogey' in Kriol and Australian English⁷), are from Kriol, while others are English-derived words with some Warlpiri or Kriol phonology, such as *uuju* (horse). Many English sounds, for example, fricatives, are retained in LW, even though they are not found in basilectal varieties of Kriol or in Warlpiri. Fricatives may be present in AE.

The LW sound system is a continuum similar to that of Kriol, which 'can be described as a continuum of sounds with an Aboriginal type sound sub-system at one end and an English type sound sub-system at the other' (Sandefur 1979). Variation along the continuum may be between speakers or within one speaker. In LW, some sounds are more like English sounds and others are more like Warlpiri and Kriol sounds.

⁷ 'Bogey' originated in an East Coast NSW language and was commonly used in Australian English in the 1950s (M. Laughren, p.c.).

LW words with Warlpiri as their source language follow the same phonotactic rules as Lajamanu Warlpiri. The phonotactics in Lajamanu Warlpiri differ from descriptions of Warlpiri in the literature⁸ (e.g. Nash, 1980). The differences are final vowel deletion, initial glide deletion, cluster modification, and semi-vowel formation. Each is explained in turn.

Warlpiri as described in the literature does not allow word-final consonants, but the phonotactics of Lajamanu Warlpiri have changed. Warlpiri has three vowels and all words are vowel final, but in Lajamanu Warlpiri the final high vowels [u] and [i] are omitted from some words and morphemes, for example, the dative case-marker *ki-k*.⁹ Syllable deletion commonly occurs with final vowel deletion in the pronunciation of some possessive pronouns, such as *nyuntu-nyangu* (you-POSS), which becomes *nyun-nyang*;¹⁰ and the possessive case-marker *-kurlangu*, which becomes *-kang*. Initial glide deletion occurs mostly on the determiner, *yinya* (there), which becomes *inya*.¹¹

Cluster modification has two forms, cluster simplification and consonant addition. In cluster simplification a velar stop is deleted from nasal-plus-velar-stop consonant clusters in ergative and locative case markers.¹² The final vowel in the ergative and locative case markers may also be deleted. As a result, the velar-initial ergative case marker has three forms: *-ngku*, *-ngu*, and *-ng*, and the velar-initial locative case marker has two: *-ngka*, and *-nga*. Cluster simplification also occurs in some words where a palatal glide is substituted for a palatal stop, as in *malju-malyu* (young man). Consonant addition has been observed in only one word: *wirlinyi* (hunting), where a palatal stop is inserted, resulting in *wirlinyji*.¹³

Semi-vowel formation occurs in some words where rhotics become semi-vowels, as in *-pardu*—*-pawu* (diminutive suffix), *-jarrimi*—*-jayimi* (inchoative verb). It is also a feature of baby talk (Laughren 1984).

The phonotactics described here occur in both Warlpiri and in LW, but they are more frequent in LW.

4. LW: Grammatical Functions

Grammatical functions are marked differently in English and Kriol from in Warlpiri. English and Kriol use SVO word order in a nominative-accusative pattern to indicate subject and object, by positioning transitive and intransitive subjects before the verb, and positioning transitive objects after the verb.

⁸ The variation may now be present in the Warlpiri spoken in other Warlpiri communities, but I only have data for Lajamanu Warlpiri.

⁹ This kind of vowel deletion was also noted earlier in Yuendumu community in Bavin and Shopen (1991).

¹⁰ *nyun-nyang* is also heard in rapid connected speech in other Warlpiri communities.

¹¹ Words with initial y followed by i followed by a palatal consonant are typically pronounced without any obvious glide onset in other varieties as well (M. Laughren, p.c.).

¹² The velar stop deletion in the ergative marker was noted in Yuendumu Community by Bavin and Shopen 1985.

¹³ *Wirlinyji* is also a common variant of *wirlinyi* in other Warlpiri communities (M. Laughren, p.c.).

Warlpiri uses case-marking to indicate subject and object, marking transitive subjects with ergative case, and intransitive subjects and transitive objects with absolutive case, which is realized as zero. Warlpiri has a cross-referencing system of pronominal clitics, hosted by an auxiliary base, which are in nominative-accusative case. The ordering of subject, verb and object is free in Warlpiri, but preferred orders arise from pragmatic considerations (Swartz 1991). In Warlpiri, core arguments need not be overt and non-overt arguments are preferred (Swartz 1991).

As in Kriol and English, the unmarked way to indicate grammatical functions in LW is with SVO word order. However, subject and object NPs may be omitted in LW, as in Warlpiri, but not in Kriol, and only under specific conditions in English.

Ergative case-marking optionally marks transitive subject NPs, usually only on NPs drawn from Warlpiri. I will return to the role of the ergative case-marker in Section 4.4.1, after presenting other elements in LW.

4.1. Verbs

LW uses mostly English or Kriol verb stems, with Kriol verb morphology. Verb morphology is similar in LW and Kriol in the following ways: (a) verbs are not inflected for tense or aspect (with the exception of some Warlpiri verb stems, which are explained below); (b) transitive verbs take a transitive marker, *-im* on the verb stem; and (c) transitive and intransitive verbs may take Kriol directional and locational suffixes [which Hudson (1983) calls third order affixes], as in example (3).

- (3) a-rra **teik-im-at**
 1sg-fut take-TR-out
 I'll take (it) out.

A difference between Kriol and LW verb morphology is that the iterative suffix, *-bat*, frequent in Kriol, is rare in LW, but an example from LW is given in example (4).

- (4) *nyampu* *ngana* i-m **jak-im-bat**
 DET Who 3sg-pst throw-TR-ITER
 This, who's throwing (it) around?

In LW the transitive suffix, *-im*, can change verb valency, as in example (5).

- (5) *jinta* *-kari* i-rra **kam-at-im** nail
 one -other 3sg-FUT come-out-TR nail
 Another one (another person), he'll take a nail out.

LW also uses some Warlpiri verb roots, all transitive, and these take the Kriol transitive suffix, reduced to *-m* as in example (6). The Warlpiri verb roots are not attested with other Kriol suffixes. The Warlpiri verb stems found so far in LW are *panti-* (pierce), *kati-* (press), *punta-* (steal) and *winji-* (pour, spill). These are in the second Warlpiri verb class, and in Warlpiri, verbs in this class show regressive vowel harmony in the past tense (Nash 1980).

- (9) *Karnta-patu-rlu-Ø-lu-jana kurdu-kurdu-ku miyi yu-ngu.*
 woman-pl-ERG-PERF-3pl-3pl child-redup-DAT food give-PST
 The women gave food to the children. (Laughren *et al.* 1996)

In example (10) the auxiliary base *-lpa* indicates past imperfective and the verbal inflection is past, so the reading is past imperfective.¹⁴

- (10) *Karnta-patu-lpa-lu-jana kurdu-kurdu-ku miyi yu-ngu.*
 woman-pl-IMPF-3pl-3pl child-redup-DAT food give-PST
 The women were giving food to the children. (Laughren *et al.* 1996)

In example (11) the future auxiliary base and non-past verbal inflection gives a future tense, prospective reading.

- (11) *Karnta kapu wangka-mi.*
 woman FUT talk-NPST
 The woman will talk. (Laughren *et al.* 1996)

Subject and object NPs may be omitted, as in example (12).

- (12) *Parda-rni ka-rna-jana.*
 wait-NPST IMPF-1sg-3pl
 I am waiting for them. (Hale 1982)

4.2.2. Kriol auxiliary

In contrast with Warlpiri, the auxiliary in Kriol, as documented by Sandefur (1979) and Hudson (1983), does not carry information about person or number. Sandefur (1979) describes five categories of auxiliary verb for Kriol: negation, tense, mode, aspect and voice. He defines auxiliary verbs as those which 'modify the meaning of the main verb of a verb phrase. They differ from main verbs in not being able to stand alone, except in topic-comment constructions which have no linking verbs' (Sandefur 1979: 125). A subset of Kriol auxiliaries appears in Lajamanu AE and is borrowed into Warlpiri, and a subset of those appears in LW. For example, past tense marker *bin* occurs frequently in Lajamanu AE but rarely in LW. Table 1 summarizes the forms which occur in LW.

Since the documentation by Sandefur (1979) and Hudson (1983), a change has occurred in the Kriol auxiliary, attested in several Kriol-speaking communities (see Section 4.3.1 for details). The future Kriol auxiliary, *garra*, a free form, has been reduced to a bound form, *-rra*. The *-rra* form attaches to English-based pronouns, resulting in a new auxiliary sub-paradigm of *a-rra*, *i-rra*, *yu-rra*, *wi-rra*, *de-rra*. In this sub-paradigm there is an element for person (the pronominal element) and an element for tense–aspect (the *-rra* element). The new *-rra* sub-paradigm is part of

¹⁴ The auxiliary base *ka* is treated as a phonological word because in some combinations, for example, the future *kapu*, it can occur in initial position in the clause. In contrast, the auxiliary base *-lpa* can never occur in initial position and must be suffixed onto the initial constituent in the clause.

Table 1 Kriol auxiliaries of negation, tense and mode which appear in LW. Taken from Sandefur (1979)

Kriol auxiliary category	Kriol auxiliary sub-category	Kriol form	English gloss
Negation	simple	<i>no</i>	not
	emphatic	<i>nat</i>	not
		<i>neba</i>	past negative
Tense	past	<i>bin*</i>	past
Mode	necessity–advisability	<i>gada, ada,</i>	should
	attempt	<i>traï</i>	try

**bin* occurs rarely in LW.

the larger LW auxiliary paradigm. Since I do not have Kriol examples, I will describe the form as it is in LW, in Section 4.3.1.¹⁵

4.3. *The Auxiliary System: LW*

In LW I distinguish between the auxiliary cluster, on the one hand, and the whole auxiliary system or paradigm, on the other. The cluster consists of two elements, one pronominal and one for tense–aspect. It immediately precedes the verb.

The LW auxiliary cluster consists of a pronominal morpheme marking the person and number features of the subject, followed by a morpheme marking TMA, as exemplified in Table 2.

The LW auxiliary forms are derived from Kriol, but the auxiliary system functions more like the Warlpiri system, in carrying information for person and number of subject as well as for tense and aspect. It is also like the Warlpiri auxiliary in that information about tense, aspect and mood is provided by combinations of the auxiliary cluster and verb morphology. The LW pronominal subject element carries information for person and number, as the Warlpiri pronominal subject clitic does. The second LW element carries information about tense–aspect. Unlike the Warlpiri

Table 2 LW auxiliary paradigm^a

LW auxiliary forms	1 singular	1 plural	2 singular	2 plural	3 singular	3 plural
Present or past	a-m	wi-m	yu-m	–	i-m	de-m
Future	a-rra	wi-rra	yu-rra	yumob-rra	i-rra	de-rra
Want to	a-na	wi-na	yu-na	–	i-na	de-na

^a LW has ways of expressing duality, but there is no single consistent dual form. Rather there are several combinations drawn from AE/Kriol and Warlpiri which express duality, including an inclusive and exclusive distinction. Some of these occur with the *yu-rra* auxiliary form, for example, ‘*yurru yurra go*’ (you two, you are going).

¹⁵ There has been no published documentation of variation in Kriol since documentation by Sandefur (1979) and Hudson (1983).

auxiliary cluster, the LW auxiliary does not indicate non-subject. In the LW auxiliary system there is no morpheme whose sole function is to indicate tense. The LW auxiliary cluster occurs in both verbal and nominal clauses. There is a LW pronoun for second person dual, *yurru*, but it does not host the LW auxiliary suffixes. There are no dual forms for first or third person. Examples of verbal clauses are given in (13)–(14); a nominal clause is shown in example (15).

- (13) *jurlpu* *de-rra* **catch-im**
 bird 3pl-fut catch-TR
 They're going to catch the bird.
- (14) *naliya* *i-m* **meik-im**
 tea 3sg-NFUT make-TR
 She's making tea.
- (15) *yu-m* *garr-um* *card* *mayi?*
 2sg-NFUT got-TR card INTERR
 Did you get a card?

The order of elements in the auxiliary clusters in the two varieties are reversed, as shown in Table 3.

The tense–aspect elements are bound forms. They are hosted by (a) LW auxiliary pronouns, (b) free pronouns drawn from Warlpiri, and (c) proper names. The LW pronominal forms also occur as free pronouns, with no tense–aspect suffix.

At first glance the third singular subject auxiliary, *i-m*, appears to be the AE/Kriol third singular subject and object pronoun, *im*. But in LW there are two homonymous *im* forms. One is analysed as two elements, subject pronominal, *i* and tense–aspect *-m*, and is part of the LW auxiliary system. The other is an unanalysed subject and object form drawn from AE/Kriol, which in LW is only an object pronoun.

4.3.1. LW auxiliary *-rra*: future (temporal)

In Sections 4.3.1–4.3.5 I present an analysis of each element of the LW auxiliary cluster, in verbal and nominal clauses. In describing tense and aspect I follow Klein's (1994) time-relational analysis. The time being talked about, or topic time, is seen in relation to the time for which the situation is valid. This relationship gives an aspectual reading. Topic time is also seen in relation to the time of the moment of speech, and this relationship gives a tense reading.

The *-rra* form in the auxiliary gives a future tense reading, indicating that the time of the event being talked about is after the moment of speech, as in example (16). The

Table 3 Order of Warlpiri and LW auxiliary cluster elements

Auxiliary cluster	First position	Second position
Warlpiri	auxiliary base: tense, aspect	pronoun
LW	pronoun	tense, aspect

time may be immediately after, or at any interval after the moment of speech. The topic time is before the time of the situation for which it is valid, so the aspectual interpretation of *-rra* is prospective.

- (16) *Nuna-rra* **pur-um** *ngula-nga*
 name-FUT put-TR ANAPH-LOC
 Nuna will put them there.

The modal interpretation of *-rra* is open. A potential, as opposed to assertional, future reading is indicated by the combination of the *-rra* auxiliary form and omission of the transitive marker on a transitive verb, as in examples (17)–(19). More specific modal readings must be inferred from the context. Examples (17)–(19) express a warning, threat, or likely action.

- (17) *i-rra* bite you **dat** *jurlpu*
 3sg-FUT bite-Ø you that bird
 That bird might bite you. -transitive, warning
- (18) *a-rra* hit you *junga* *jirrama*
 1sg-FUT hit-Ø you true two
 I'll hit you two/the two of you. -transitive, threat/warning
- (19) *i-rra* cry **dat** *Apu*
 sg-FUT cry that name
 She might cry, that Apu. -intransitive, warning/potential

The *-rra* forms may be an internal change in Kriol, which has taken place since documentation by Sandefur (1979) and Hudson (1983). Kriol has a future auxiliary, *garra* (written as *gada* in Sandefur's description). In Sandefur's documentation (cf. Table 1, above) there are both *gada* and *ada* forms. Sandefur says the *ada* form is infrequent, expresses necessity or advisability, and is future oriented but can be used with past tense *bin*. He does not analyse it as having a pronominal element. The *ada* form, however, may have been a motivation for the analysis of *-rra* presented here.

In the change from *garra* to *a-rra*, the initial *ga-* is omitted, leaving *-rra* as the future form. The *-rra* is then suffixed to the pronominal forms derived from English/Kriol (*a*, *yu*, *wi*, *de*). The third singular *i-rra* form is attested in Elliot (R. Green, p.c.). The *-rra* suffix attached to Kriol pronouns is attested in some Kriol-speaking communities such as Kalkarindji in the Victoria River area and Ngukurr in the Roper area (F. Meakins, p.c.) and Beswick (S. Cutler, p.c.).

The change to *-rra* forms is likely to have come into LW from Kriol. Its emergence in LW could have been reinforced through a process akin to the code-mixing process of congruent lexicalization (Muysken 2000). In congruent lexicalization, 'the two languages share a grammatical structure which can be filled lexically with elements from either language' (Muysken 2000). LW shares with Warlpiri an auxiliary structure with an element marking person and number features (of subject) and a TMA morpheme. While adopting the *-rra* form from Kriol (< *arra* < *garra* < *E.gotta),

LW combines it with the pronominal subject morpheme. Note that *-rra* also suffixes to proper nouns, such as example (16), where it is directly attached to *Nuna*.

The AE/Kriol *garra* still occurs in LW, but much less frequently than the *-rra* forms, and it usually has a reading of necessity rather than future.

4.3.2. Auxiliary *-m*: non-future (temporal)

The *-m* auxiliary suffix indicates that the time of the event denoted by the verb began before the moment of speech, that is, in the past. It is left open whether that activity continues at the moment of speech, but *-m* cannot refer to the future. In example (20), an adult asks a child where she put a piece from a puzzle. The situation of 'putting' began before the moment of speech and ended just before the mother spoke.

- (20) *nyiya nyampu? nyarrpara yu-m purr-um?*
 what This where 2sg-NFUT put-TR
 What about this one? Where did you put it?

In contrast, in example (21), a mother is talking to her child about a video clip. In the scene an elephant leads a mouse out of a maze, and this takes a couple of seconds. The situation of 'leading the mouse' began before the moment of speech and continues while the mother is talking.

- (21) *i-m teik-im elephant-i-ng*
 3sg-NFUT take-TR elephant-euph-ERG
 The elephant is taking it.

In examples (20) and (21) the difference in aspectual readings is inferred from the context. In example (20) the topic time is after the time of the situation, so the aspect is perfective. In example (21), the topic time is within the time of the situation, so the aspect is imperfective.

While a combination of the non-future morpheme *-m* in the auxiliary cluster and transitive suffix *-im* on the verb, as in example (20), can be interpreted as either completed or not completed according to the context, the combination of *-m* in the auxiliary and the progressive *-ing* on the verb can only be interpreted as present progressive, as in example (21). The perfective/imperfective distinction is not formally marked in LW. This is also a feature of Warlpiri in which the progressive/non-progressive contrast and the past simple vs. past perfect (did vs. have done) are not marked.

The *-m* form appears to be derived from AE/Kriol past tense marker *bin*. The form is related to two other forms: (a) the English contraction *I'm*, and (b) the AE/Kriol third singular pronoun *im*.

I hypothesize that in AE/Kriol, when *bin* followed a pronoun [for example, in 'a *bin go*' (I went)], the middle vowel was omitted, and the form became /abn/. Then, the manner of articulation of the bilabial stop /b/ was omitted, and the /n/ assimilated to the bilabial place of articulation, creating a bilabial nasal /m/. So the

pronoun plus tense–aspect element became /a-m/. It is not surprising, then, that the -m element refers to past time, as did its putative source, the morpheme *bin*.

The same phonological process applies to each pronoun, resulting in *a-m* (I), *yu-m* (you), *wi-m* (we), *de-m* (they). Evidence of a pathway from AE/Kriol *bin* to LW -m is that the ‘*abn*’ form has been heard in the Tennant Creek area (J. Simpson, p.c.), alongside the earlier ‘*a bin*’ forms, and occurs once in my LW data alongside the -m forms. So far the -m sub-system, with a pronominal element for first, second and third persons, is not attested beyond LW.

In a process similar to the development of the -*rra* forms, once the change from *a bin* to *a-m* took place, the further development of the sub-system of -m forms could have been through a process akin to congruent lexicalization. In this instance the grammatical form is shared by all three of the source languages: the Warlpiri auxiliary cluster, the new Kriol form, and the English contraction *I’m*. In English *I’m*, the initial element is a pronoun and, in verbal clauses, the second element an auxiliary. The interpretation of the -*rra* and -m forms would reinforce each other.

The -m form also occurs with nominal predicates, as in example (22). This is similar to Warlpiri, in which a pronominal clitic co-occurs with a nominal predicate. The -m form resembles English, except that in English the ‘*m* of *I’m* represents a copula verb. The English *I’m* probably reinforced the interpretation of the LW -m forms, because, in addition to the formal similarity, only the LW -m forms, and not the -*rra* or -*na* forms, occur with nominal predicates.

- (22) a-m *pina* *ngaju* *na*
 1sg-NFUT knowledge 1sg pro now
 I know now.

The third source of the LW -m form is the AE/Kriol third singular subject and object pronoun *im*. Its presence as a subject form is likely to have reinforced the other reanalyses. In LW *im* also exists unaltered from its AE/Kriol source as third singular object pronoun. It may be the case that multiple sources have simultaneously influenced the development of new forms and paradigms.

The future auxiliary -*rra* sub-paradigm is attested in several places in the Kriol speaking area. In contrast, the non-future -m sub-paradigm is only attested in Lajamanu. So the non-future -m sub-paradigm originates in Lajamanu and we are yet to see if it spreads into the Kriol speaking area.

4.3.3. Auxiliary -*na*: desiderative (modal)

The -*na* form is a modal suffix which indicates ‘wanting to’, and occurs with transitive and intransitive verbs. Logically the -*na* form is open with respect to tense, but in my data all examples refer to present and future time, and have imperfective aspect. When used with the third person subject, the -*na* form can also indicate what the speaker wants for the third person subject, rather than what the subject wants. So *i-na* also has a reading of ‘necessity’, as in example (24).

(23) yu-na **hab-um** *kuyu* *mayi*
 2sg-want have-TR meat INTERR
 Do you want to have meat?

(24) i-na **sidan** *nyampu-rla*
 3sg-want Sit here-LOC
 She has to sit here.

The *-na* form is derived from English 'want to', when pronounced as 'wanna'. In a development similar to that of the *-rra* forms, the initial *wa* is omitted, resulting in *-na* which is suffixed to each pronoun. The *-na* affix is the only auxiliary element which alone indicates mood. The reanalysis of *-na* completes the LW auxiliary paradigm.

4.3.4. Verbal affixes: transitive marker *-im* and progressive *-ing*

The transitive marker *-im* typically occurs on transitive verbs, as seen in several examples above. It is omitted under the following circumstances:

- a. when *-rra* is present in the auxiliary cluster to issue a threat or warning, as in examples (17)–(19) above;
- b. when the transitive verb has the progressive 'ing' marker.

The progressive *-ing* affix on transitive verbs, as in example (25), and intransitive verbs, as in example (26), indicates events which are in progress at the moment of speech. In contrast to the English progressive *-ing*, which can be applied to the past and future, the LW *-ing* specifically indicates 'activity-in-progress-now'. In line with this, it does not occur with the future *-rra* auxiliary suffix.

(25) i-m **hab-ing** *it* *lolly*
 3sg-NFUT have-prog it lolly
 She's having the lolly.

(26) a-m wait-ing *tarnnga-juk*
 1sg-pst wait-prog long time-still
 I've been waiting for a long time.

Although a progressive transitive verb does not take the transitive marker *-im*, it is almost always followed by the third person pronoun *it*, as in example (25) above, unless the object is first or second person. The third person pronoun *it* rarely occurs as a subject pronoun, or as the object of a non-progressive verb. So while *it* is not a dedicated marker of transitivity, it mostly occurs following a progressive transitive verb, and so acts like a transitive marker. An overt object NP is optional, and may occur before or after the auxiliary–verb component. That *it* should function somewhat like a transitivity marker in a contact situation between English and a traditional Australian language is not new, since in early Australian Pidgin both *-im* and *-it* were transitivity markers (Koch 2000), and *-it* is still used in Kriol as a transitivity marker for some verbs, such as *gibit* (Sandefur 1979).

As described in Section 4.3.2, the *-m* auxiliary indicates that the situation denoted by the verb began before the moment of speech. So in examples (25) and (26), the activities began before the moment of speech, as indicated by *-m*, and are in progress at the moment of speech, as denoted by *-ing*. The length of time before the moment of speech in which the activity was in progress is left open, and can be expressed by an adverb, for example, *tarnnga-juk* (long time-still) in example (26). The context of example (26) is that the woman had been waiting for some time before the moment of speech and was still waiting when she spoke.

Table 4 gives a summary of the temporal and modal interpretations of LW auxiliary and verbal combinations.

4.4. Case-marking

4.4.1. Ergative case-marking on transitive subjects

The distribution of ergative case-marking in LW is strikingly different from that in Warlpiri. In Warlpiri the ergative is obligatory except on first and second person singular pronouns (Bavin 1985), so there is a split in ergative case-marking according to an animacy hierarchy. In LW the ergative occurs variably on transitive subject NPs, and occurs more on those which are drawn from Warlpiri than on those drawn from English or Kriol. So one factor in ergative case-marking distribution may be a source language distinction. Since the presence of the ergative is not necessary for indicating grammatical relations, its presence may be motivated by pragmatic factors.¹⁶ A shift in the role of ergative case-marking to that of marking discourse prominence has been documented for several traditional Australian languages (Pensalfini 1999). A

Table 4 Temporal and modal interpretations of LW auxiliary and verbal combinations

Auxiliary affix	Verbal affixes			
	Transitive verbs		Intransitive verbs	
	verb + <i>-im</i>	verb + \emptyset	verb + \emptyset	verb + <i>-ing</i>
<i>-m</i> event began before moment of speech	-event completed before moment of speech; -event continues at moment of speech	–	-event completed before moment of speech	-event continues at moment of speech
<i>-rra</i> event is after moment of speech	future event: open as to modal interpretation	potential event, warning, threat	future event: open as to modal interpretation	–
<i>-na</i> want to, necessity	want to, necessity	–	want to, necessity	–

¹⁶ In another morphologically ergative language, Samoan, Ochs (1985) found that speakers apply ergative case-marking less when they are in informal or intimate family contexts, and more when they are in formal, public contexts. So far I do not have evidence that the same socio-pragmatic distinction applies to Warlpiri speakers in Lajamanu.

similar change in the function of the ergative is not attested in Warlpiri, but something similar may be operating in LW. While my analysis is incomplete, there are some promising lines of inquiry, based on initial analysis of short LW narratives in which seven adults told stories to young children.¹⁷

One line of investigation is that in addition to source language of NP, factors such as argument structure, animacy of agent and treatment of 'new' information play a role in determining when ergative case-marking is applied.

Table 5 shows that in the narratives ergative case-marking is considerably less frequent on human than on non-human agents. In Warlpiri there is also a case-marking distinction based on animacy, but the distinction is drawn at a different point in the hierarchy.

Du Bois (2003) makes a distinction between lexical NPs and reduced forms, for example, pronouns or cross referencing. The first mention of a referent is relatively less cognitively accessible than subsequent mentions of a prior referent, and needs a more substantial lexical realization. So the first mention of a referent tends to be a lexical NP. Later mentions of the same referent are achieved through use of reduced forms. An argument which was previously mentioned is more cognitively accessible than a new argument which needs a more substantial lexical realization.

In spontaneous discourse, 'certain configurations of arguments are systematically preferred over other grammatically possible alternatives' (Du Bois 2003: 24). These preferred configurations constitute a Preferred Argument Structure. Two constraints on Preferred Argument Structure are relevant here: (1) avoid a lexical agent; and (2) avoid presenting new information in the agent role. Cross-linguistically, a new argument tends to be presented in the intransitive subject role.

Table 5 Distribution of ergative case-marking in LW narratives in relation to source language and animacy

Type of agent NP	Source language	Number case-marked	Number of overt agents	% case-marked, within each category
Human: pronouns	AE/Kriol	0	27	22.4
	Warlpiri	3	3	
Human: determiners, numerals	AE/Kriol	1	1	88.8
	Warlpiri	7	15	
Non-human, animate	AE/Kriol	5	6	92.9
	Warlpiri	3	3	
Inanimate	AE/Kriol	0	0	47.9
	Warlpiri	15	16	
Totals		34	71	

¹⁷ Six of the narratives come from elicited production tasks, in which adults used a picture stimulus to tell a story to a child, and one was a spontaneous story told to a child while playing with dolls.

Du Bois' (2003) distinction between lexical NPs and reduced forms holds for the LW narratives, where arguments are introduced into the narrative by a lexical NP. A human agent is then referred to by a pronoun or through reference in the auxiliary system after its introduction. This is consistent with the constraint 'avoid a lexical agent'.

In contrast to the human agents, LW non-human agents, including inanimate agents, are likely to continue to be realized as lexical NPs after being introduced and usually receive ergative case-marking, as in examples (27) and (28), which are consecutive utterances from one speaker.

- (27) ah! *jinta-ju watiya-ng i-m panti-rni-m wirliya*
 ah one-TOP wood-ERG 3sg-NFUT pierce-NPST-TR foot
 ah! the one, the wood is piercing (his) foot.

- (28) *Japalyi i-m panti-rni-m watiya-ng*
 name 3sg-NFUT pierce-NPST-TR wood-ERG
 It's Japalyi (that) the wood is piercing.

Use of a lexical NP for subsequent mentions of the same argument violates the constraint 'avoid a lexical agent'. Although the constraint refers to tendencies, not absolutes, it is notable that all LW narrators used a lexical NP for the same inanimate agent in multiple subsequent mentions. An inanimate agent is less 'agentive' and so is less easy to access cognitively as an agent. LW does not have a passive construction, so the new information of a thorn piercing a boy cannot be presented by a passive such as 'he was pierced by a thorn', where the semantic role of agent would be an oblique object. In LW an agent is always presented as grammatical subject, and an inanimate agent is more likely to be realized as a lexical NP.

A pattern which is common in spontaneous discourse is that the ergative case-marker is applied to the first mention of a lexical agent but not to a subsequent mention, as in examples (29) and (30), which are consecutive utterances from one speaker.

- (29) *i-m bring-im nalija Nungarrayi-ng*
 3sg-NFUT bring-TR tea name-ERG
 Nungarrayi brought tea.

- (30) *i-m bring-im nalija Nungarrayi*
 3sg-NFUT bring-TR tea name
 Nungarrayi brought tea.

In the talk prior to example (29), *nalija* (tea) was mentioned but not the person called *Nungarrayi*, so example (29) introduces *Nungarrayi* as an agent. It seems that the ergative case-marker in (29) calls extra attention to the agent, which is not needed in the next mention. So the ergative case-marker may also indicate focus, in the sense

of Lambrecht (1994), in which the focus is new information, unrecoverable from the previous talk.¹⁸

In sum, LW has two case systems operating to distinguish grammatical functions: (a) the nominative-accusative system instantiated through word order and use of English pronouns; and (b) the ergative-absolutive system instantiated through ergative case-marking on certain lexical NPs. A speaker's decision about which of these to produce is determined by an interaction of several factors: source language, animacy and pragmatic constraints, including argument structure constraints.

The combination of two case systems in LW is similar to that in Warlpiri, in which overt NPs are case-marked according to an ergative-absolutive system, and pronominal agreement clitics follow a nominative-accusative system. Ergative case is not present in Kriol.

Ergative case-marking is also variably present in LW on adverbs of manner and time. In Warlpiri, ergative case-marking is obligatory on manner adverbs and optional on (some) time adverbs in *transitive clauses*. In LW ergative case-marking is optional on both.

4.4.2. Case-marking: oblique functions

In LW, oblique functions are indicated by Warlpiri case-marking and English prepositions. Case-marking occurs in 80% of total occurrences of either case-marking or prepositions. The only AE/Kriol preposition used is *for*, often pronounced as *bor* or *br*, as in example (31).

- (31) what yu-m **do-im** **br-im?**
 what 2sg-NFUT do-TR for-3sg
 What did you do to her?

- (32) an **you talk for im** *wangka* a-m **talk for you.**
 and you talk for 3sg you know 1sg-NFUT talk for you
 and you talk to her the way you know I told you to.

The function of *for/bor* as in examples (31) and (32), is like the dative in Warlpiri. In Warlpiri, the verb *wangka* (talk) takes a dative case-marked object NP.¹⁹

¹⁸ There is a difference in intonation between the two sentences. In example (29) there is a slight pause before *Nungarrayi-ng*, so that *Nungarrayi* could be said to be an NP topic outside the clause nucleus, but in example (30) there is no intonation break so that the NP could be said to be the subject inside the clause nucleus. Pensalfini (1999) notes that in Jingulu, dislocated transitive NPs (set off intonationally from the clause nucleus) are not case-marked, but transitive subject NPs within the clause are. There could be a similar distinction in LW, along the lines of subject-topic, but for these two LW sentences the application of case-marking is the reverse of that in Jingulu, as in these LW sentences the topic outside the clause nucleus is case-marked, but the subject is not.

¹⁹ Hudson (1983) explains that in Kriol *for* functions similarly to the dative in Walmajarri.

4.4.3. *Locative case marker: distribution in LW*

In the Warlpiri literature, velar initial locative allomorph *-ngka*, occurs on two syllable words, and *-rla* on words of three or more syllables. In Lajamanu Warlpiri (especially with speakers under 60 years old), the locative case marker has three allomorphs, *-ngka*, *-nga*, and *-rla*. The velar initial forms occur on words of any syllable length. When Warlpiri speakers code-mix or borrow and insert English nouns, they often apply the coronal-initial form, *-rla*, irrespective of the word length. In LW the distribution is similar, but more systematic. The *-ngka* and *-nga* forms occur on words of any length which are usually drawn from Warlpiri, as in example (33). The *-rla* form occurs on words of any length which mostly are drawn from English or Kriol, as in example (34). The *-rla* form can occur on words drawn from Warlpiri as well as from English and Kriol, but *-nga* rarely occurs on words drawn from English or Kriol. Another redistribution of locative allomorphy is that in Warlpiri, determiners *nyampu* (this, here) and *inya* (that, there) take the *-rla* locative allomorph. In LW they take both the *-ngka* and *-rla* allomorphs.

LW retains the suffixing, locative case-marking system of Warlpiri, rather than using the locational prepositional systems of English or Kriol.

- (33) *karnta-pawu ngula you got-im ngula-jala rdaka-nga*
 woman-DIM ANAPH you got-TR ANAPH-EMPH hand-LOC
 You've got the woman, there in your hand.

- (34) *fence-rla yu-rra shat-im-ap ngula-j*
 fence-LOC 2sg-NFUT shut-TR-up ANAPH-FOC
 Lock that one up inside the fence.

All other Warlpiri oblique case-markers occur in LW, and their functions are the same as in Warlpiri.

4.5. *Word Order*

Word order in LW is predominantly SVO, but initial position objects and final position subjects are not uncommon. This contrasts with the much freer word order of Warlpiri, and with the slight preference seen for OV order (Swartz 1991). That is, in LW the position of the subject and object are much more predictable than in Warlpiri.

Given that a transitive subject is not always case-marked, we might expect that, when there is no ergative case-marking, SVO word order would reliably indicate grammatical functions. However, examination of the same seven LW narratives analysed in Section 4.4.1 shows that this is not the case. OV order can occur when there is a lexical agent, as in example (35), or when there is no overt agent, as in example (36).

(35) *Japayi i-m trip-im watiya-ng*
 name 3sg-NFUT trip-TR tree-ERG
 The tree made Japayi trip.

(36) *jurlpu de-rra catch-im*
 bird 3p-FUT catch-TR
 They'll catch the bird.

OAV order can also occur when there is a pronominal agent, as in example (37).

(37) *jupu na dey jeis-ing it*
 bird now they chase-prog it
 They're chasing the bird now.

We might also expect a reliable interaction of word order and case-marking, such that SVO word order would not require ergative case-marking on agents, but VA order would. But in the narratives case-marking is optionally applied to both AV and VA word orders, as Table 6 shows.

Table 6 shows the order of lexical transitive agents and verbs, regardless of whether there is an overt object. Some 54% of the total number of verbal clauses are transitive, and 31% of those have lexical agent NPs. The table shows that AV word order occurs in 57% of the 30 clauses, and VA order 43%. Ergative case-marking is present in an average of 60% of the clauses (59% with AV word order and 62% with VA word order). So AV word order and ergative case-marking are preferred.

Given that animacy plays a role in the distribution of ergative case-marking, we ask whether animacy of agent is relevant to word order.

Table 7 shows that human and animate agents tend to occur in AV order, while inanimate agents occur in both AV and VA order. The ratio of AV to VA orders in the

Table 6 Word order and ergative case-marking on lexical agents in seven LW narratives

Word order	ERG present	ERG absent	Totals
AV	10	7	17
VA	8	5	13
Transitive clauses with lexical agents	18	12	30
Total number of transitive clauses			97
Total number of clauses in narratives			181

Table 7 Animacy of lexical agents and distribution of AV and VA word order in seven LW narratives

Word order	Agents		
	Inanimate	Non-human, animate	Human, including determiners, numerals
AV	5	6	11
VA	7	1	0

LW texts is similar to that found in Warlpiri adult narratives (Swartz 1991), where AV clauses are twice as likely to occur as VA clauses.

In sum, word order in LW is more fixed than word order in Warlpiri, and more free than word order in English and Kriol.

5. Discourse Markers

There are several discourse markers used in LW. Some of them are derived from Warlpiri and one is derived from English.

- (38) *Nungarrayi dat ngaju-nyangu yinarlingi angka?*
 Name that 1sg-POSS echidna tag
 Nungarrayi, that's my echidna, isn't it?

The form, *angka*, in example (38), is common in both LW and in Lajamanu Warlpiri. It is not described in the literature for Warlpiri, so it must be a recent innovation. It functions as a tag does in English. There are no tag forms documented for Warlpiri. The derivation of *angka* is from *yangka*, which means 'you know the one' (Warlpiri Dictionary).

- (39) *jalpi kala-mpa wapa-ja yangka*
 Self USIT-2sg walk-PST you know
 You used to walk by yourself as we know.

Yangka, in example (39), asserts shared knowledge of speaker and hearer. In contrast, the tag *angka*, in example (38) above, functions as a request for confirmation of shared knowledge, and requires a response. Both *yangka* and *angka* are common in both LW and Warlpiri.

Another Warlpiri discourse device common in LW appears in several forms: *nganta*, *ngana*, *nana*, *ana*, *wana*. The original Warlpiri form is *nganta*, meaning 'reportedly', or 'said to be' (Warlpiri Dictionary). It appears often in conversations. The LW forms of *nganta* function in the same way as the original form does in Warlpiri. An example of *nganta* in Warlpiri is given in (40) and in LW in example (41).

- (40) *wajilipu-ngu nganta karnta-jarra-ng jirrama-jarra-ng.*
 chase-PST reportedly woman-dual-ERG two-dual-ERG
 They chased it, it says, two women.

- (41) *an de-m find-im dat jurlpu nana nes-rla*
 and 3pl-NFUT find-TR that bird reportedly nest-LOC
 And they found the bird, it says, in the nest.

Another discourse marker, *anus*, in example (42), is derived from English *honest*, and emphasizes the truth of the proposition.

- (42) dat *nganpa-kang* anus
 that 1plexc-POSS EMPH
 that's ours, really!

Several LW discourse particles come directly from Warlpiri, such as *waja* (assertive emphasis), *jala* (contrastive emphasis) and *yakarra* (asserts surprise), and the Warlpiri topicalizing morpheme *-ju*. The particle *na* (now), from Kriol, which is also present in adult Warlpiri, occurs frequently.

6. Older Speakers' Warlpiri and English Code-mixing and Code-switching

People over age 30 in Lajamanu commonly code-mix and code-switch between Warlpiri and AE/Kriol. However, their code-mixing and code-switching is not the same as LW, because the speakers do not use the LW auxiliary paradigm. The LW auxiliary is the strongest diagnostic of LW. Examples of code-mixing and code-switching from speakers over 30 years old follow in (43)–(47).

- (43) *nyarrpara* you **garra** **purr-um**
 where 2sg FUT put-TR
 Where will you put it?

Example (43) shows the use of the AE/Kriol future auxiliary verb *garra* in a question which contains code-mixing between AE/Kriol and Warlpiri. The speaker is about 40 years old. She does not use the LW *yu-rra* form.

Examples (45)–(47) are one utterance from a person about 60 years old, and show her use of the AE/Kriol simple past tense form *bin*, not the LW auxiliary *-m* form.

Examples (44) and (46) show code-mixing of AE/Kriol and Warlpiri. Example (45) shows a code-switch to a full Warlpiri clause containing a pre-verb borrowed from English.

- (44) a **bin** walk, a **bin** look raun, *mungulyurru*
 1sg PST walk 1sg PST look round early
 I walked, I walked, I looked around, early.
- (45) knock-up-*jarri-ja-rna*
 knock-up-INCHO-PST-1sg
 I was tired.
- (46) *kuja* a **bin** walk, *kuja*, *kuja*
 thus 1sg PST walk thus thus
 Here I walked, here, here.

Examples (47) and (48) show consecutive utterances from a conversation between J, who is in his 40s and is not a LW speaker, and N, who is in her 20s and is a LW speaker. They are arguing about who owns the money a child is playing with. J claims that Jangala gave the money to him, and N claims that it is Nungarrayi's money.

- (47) J: **na** **A** **bin** **teik-** *Jangala* **bin** **gi-me** **old-im** **for** **im**
 no 1sg PST take name PST give-1sg hold-TR for 3sg
 No, I took-, Jangala gave it to me, to keep it for him.
- (48) N: *nyan-nyang* *jala* **a-m** **gib-im** **fibe dollar** *Nungarrayi-k*
 3sg-POSS EMPH 1sg-NFUT give-TR five dollar name-DAT
 It's hers, actually! I gave five dollars to Nungarrayi.

In example (47) J uses the AE/Kriol simple past tense form *bin*. In contrast, in example (48), N uses the LW auxiliary non-future *a-m* form. There is no transitive suffix on the verb *teik* in example (47) because it is a false start. The examples show a person, who is not a LW speaker, using the AE/Kriol auxiliary *bin*, and a LW speaker using the LW non-future *a-m* form in the same conversation.

Examples (43)–(47) show how Warlpiri speakers code-mix and code-switch in AE/Kriol and Warlpiri, and how they borrow English words into Warlpiri. Example (49) demonstrates that LW resembles the code-mixing of older people's speech in that it consists of elements from AE/Kriol and Warlpiri. But it demonstrates a contrast with older people's speech in the use of the LW auxiliary form *a-m*, not the AE/Kriol past form *bin*.

7. Why LW is Not Code-mixing

The ways in which the three source languages combine in LW both resembles and differs from the code-mixing of older Warlpiri speakers. LW is likely to have grown out of the AE/Kriol code-mixing of Warlpiri speakers, but the LW system has conventionalized and is not code-mixing any longer. Warlpiri speakers' code-mixing is like LW in that there is insertion of AE/Kriol verbs, but it is unlike LW in that there is no use of the LW auxiliary system. Arguments supporting the assertion that LW is a new language, not code-mixing, follow.

Speakers cannot be code-mixing if the elements involved are not present in any of the languages they are allegedly mixing. The LW auxiliary paradigm does not occur as a complete system in Kriol. A subset of the system, some of the *-rra* forms, are attested in Kriol, but the *-m* and *-na* subsystems are not attested outside LW. If LW were code-mixing, we would expect to find the source auxiliary system in AE or Kriol spoken outside Lajamanu. Warlpiri, AE/Kriol and LW have different verb and auxiliary systems. Older speakers of Warlpiri do code-mix by inserting AE/Kriol verbs with a transitive *-im* suffix into otherwise Warlpiri clauses, but they do not use the LW auxiliary paradigm with these verbs. Rather, they use the AE/Kriol auxiliaries, future *garra* and past *bin*, or else no auxiliary, and the third singular subject pronoun *im*. Since older Warlpiri speakers do not use the LW paradigm as a system, but only use *im*, they have not analysed *im* as it is analysed in LW's auxiliary system, that is, as bimorphemic *i-m*. Some of the Warlpiri code-mixed clauses resemble LW clauses where there is no tense–aspect element in the auxiliary cluster. But *garra* and *bin* occur frequently in Warlpiri code-mixing, whereas LW speakers only sometimes use *garra* (to indicate necessity) and rarely use *bin*.

Neither LW speakers nor older Warlpiri speakers code-mix the auxiliary and verb of LW and Warlpiri. That is, they do not use LW auxiliary clusters with Warlpiri verbs, or Warlpiri auxiliary clusters with Kriol or LW verbs. Warlpiri verb stems such as in the *pantiri-m* examples [examples (28) and (29)] are not problematic because they only occur in LW with the transitive affix *-m*, they do not occur in LW in the same form as Warlpiri phonological words, that is, without the Kriol *-m* affix.

To illustrate, I briefly present the productive means of verb formation in Warlpiri. The Warlpiri verb commonly consists of a preverb and bound verb (Nash 1980). Main verbs are a closed class and preverbs are an open class. New verbs are formed by using a preverb with either of two bound verbs, the inchoative *-jarrimi* or transitive *-mani*. Items from English and Kriol can be borrowed into the preverb slot, as in examples (49) and (50). An English or Kriol preverb is integrated phonologically by vowel addition, glossed as euphonic.

- (49) *Walyiri-nga* *stuck-jarri-ja* *wheel-i-ji*.
 sand-LOC stuck-INCHO-PST wheel-euph-TOP
 The wheel was stuck in the sand.
- (50) *jinta-kari-rli* *ka-Ø-Ø* *open-i-ma-ni*.
 one-other-ERG IMPF-3sg-3sg open-euph-TR-NPST
 The other one is opening it.

An entire Kriol verb, with the transitive affix and a directional suffix, can be borrowed into Warlpiri as a preverb, as in example (51).

- (51) **tak-im-at-ma-ni** *ka-Ø-Ø*.
 take-TR-out-trans-NPST IMPF-3sg-3sg
 He's taking it out.

In the above examples English and Kriol verbs are inserted into Warlpiri pre-verb slots, and combined with Warlpiri bound verbs and the Warlpiri auxiliary system. In contrast, neither the Warlpiri preverb–verb combination nor the Warlpiri auxiliary appears in LW. When a Warlpiri verb stem is used it has the AE/Kriol transitive *-m* affixed [see example (6) in Section 4.1].

In sum, the difference between the two varieties is that LW speakers apply the LW auxiliary–verb system, and older Warlpiri speakers, when code-mixing, do not. Table 8 gives examples of English and Kriol verbs as used in Warlpiri code-mixing and in LW.

The third reason in support of LW as a new language is that the distribution of elements in LW differs from older Warlpiri speakers' code-mixing. The most striking example of the difference is the distribution of ergative case-marking in LW and Warlpiri, described in Section 4.4.1. To a lesser extent, the distribution of locative case-marking also differs in the two varieties. Older Warlpiri speakers apply the *-rli* form to words of three syllables or more and to lexically specified determiners, and

Table 8 English and Kriol verbs as used in Warlpiri code-mixing and in LW

Verb stem	Source language	Transitive/intransitive	Form when borrowed into Warlpiri	Form in LW
Bump	Kriol	transitive	bumpu-mani, bump- um	bump- um
Open	English	transitive	openi-mani, open- im	open- im
Play	English	intransitive	play-jarrimi	play
Panti-	Warlpiri	transitive	Pantirni	pantirni- m

the *-ngka* form to words of two syllables. In LW the distinction is based on the source language of the word: *-rla* for English words and *-ngka* for Warlpiri words. Between these two extremes are speakers of Warlpiri between about 30 and 60 years old, who apply locative case-marking in Warlpiri according to both the word length and the source language distinctions. Warlpiri oblique case-marking and English prepositions are distributed along an 80% – 20% ratio in LW, whereas case-marking is used all of the time in Warlpiri.

The fourth reason for LW being a new language is that LW is now being transmitted to children as one of their first languages and this is an indication of its stability. Children target LW as the language they produce first when they begin to speak, and children and young adults almost always use this language, even when they are speaking to an older person who is speaking to them in Warlpiri or who is code-mixing in Warlpiri and AE/Kriol. That children in Lajamanu were ‘mixing’ Warlpiri and English was documented in 1979 (Leeding 1979), which is in line with the oldest LW speakers being about 30 years old.

LW speakers distinguish between Warlpiri, LW and English in their production. When children over five years, and young adults, speak Warlpiri—for example in elicited production tasks—they use the Warlpiri verb and auxiliary system. When they borrow from AE/Kriol into Warlpiri, they insert an AE/Kriol item into the Warlpiri preverb slot and use a main verb from Warlpiri. The use of different verb–auxiliary systems in each language shows that they are separate systems. Children similarly do not use the LW auxiliary system in their English, for example when speaking to native speakers of English.

The fifth point is that LW is not one language with extreme borrowing, since grammatical structures as well as lexical items from each of the source languages occur consistently, as discussed above.

In conclusion, the evidence presented here demonstrates that LW is a new language for which AE, Kriol and Warlpiri are the lexifier languages. Most verb stems and verbal inflections are from AE/Kriol, but the bulk of its nominal morphology derives from Warlpiri. It has an innovative auxiliary system consisting of a subject prefix and a TAM marking element. Subject function is marked by auxiliary prefixes derived from English nominative pronouns, and to some extent, in the case of transitive subjects, by ergative case-marking. While LW word order appears to be somewhat less free than in Warlpiri, it is certainly more variable than in AE or Kriol. As in Warlpiri,

varying word order is primarily determined by factors such as animacy, discourse prominence and presuppositional structure, rather than strictly grammatical factors relating to subject and object functions as it is in English and Kriol. LW is transmitted to children as one of their first languages and it is the language of their everyday interactions.

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