6 Features of Nominal modification

A nominal in any language can be modified to either change its meaning or add information to it in various ways. Nominals in the Roper River substrate languages and Roper Kriol are no exceptions. This chapter will examine how nominals can be modified by the following: demonstratives in §6.1, adjectives in §6.2, possession markers in §6.3 and number marking in §6.4. This chapter is similar to the previous three in that in each section the shared core features from the substrate languages will be identified, but it also differs by directing attention to both structural characteristics and semantic categories of particular features. Other findings from previous chapters will be used throughout, although they are most useful in defining the prediction list. Presentation of the analysis of the corresponding feature in Kriol, if applicable, will determine whether transfer may have taken place at a previous stage of pidgin development. The availability constraints concerning perceptual salience and congruence, as well as other explanatory tools, are then examined to explain the results.

6.1 Demonstratives

6.1.1 In the substrate

Heath (1984:269) says: 'The demonstrative system is extremely complex formally; it is both complicated and extremely important functionally'. While this refers specifically to Nunggubuyu, it applies to all the substrate languages here. The task in this section, therefore, is to narrow down all the feature possibilities to those that are shared core features in the substrate languages.

All four substrate languages employ both demonstrative pronouns and demonstrative adverbs. One difference between the two in all four languages is that only demonstrative pronouns can modify nominals, as shown in (108) and (109).

(108) **n–urlu** gudarru mal–nga–winya
NC–that hill climb.CV–1sg–GO:FUT
I will climb (up) that hill. (lit. That hill I will climb) (Alawa, Sharpe 1972:66)

(109) ngun–gor–gan **nu–gunhbirri–yih** may–yih
3sg/1sg–sick–root:PRS **NC–that–ERG** food–ERG
The/that food is making me sick. (lit. It is making me sick, that food.) (Ngalakgan, Merlan 1983:75)

These examples show that demonstrative pronouns can also carry the noun class and case marking, which, as discussed in chapter 4, are indicative of nominals in the substrate languages. Demonstratives can also occur as arguments in all the four substrate languages, an example of which is provided in (110). Here the demonstrative pronoun acts as the object of the verb meaning 'saw' and the subject of the embedded clause that follows.

(110) mal–nga–anga nga–naji **ni–nya** **gana**
get.up.CV–1sg–DO:PST 1sg/3sg–see:PST **NC–this** **NC–DEF**

mun–ga–anji
bend.forward.3sg–DO:PST

I got up and I saw it/this bending forward (to feed). (Marra, Heath 1981a:325)

Demonstratives can also occur as predicates in all the substrate languages. Example sentence (111) shows a demonstrative pronoun acting as a predicate.

(111) **ya:–gi** na–warlyi–nyung
this–NC NC–male–human.sg
The man is here. (lit. *The man is this.)* (Nunggubuyu, Heath 1984:278)

Demonstrative adverbs are, however, more commonly found acting as predicates, as in examples (112) and (113).

(112) **nga–gi–n.garra**
1sg-NC-here
I am here (Marra, Heath 1981a:151)

(113) **gu–mu–gohje** mun.gu–may
3sg–NC–there NC–vegetable.food
The food is there. (Ngalakgan, Merlan 1983:62)

The examples used so far have shown some affixes that can apply to the demonstratives. Three of these may be described as core features in narratives in all the substrate languages. These are listed in Table 31 with examples following in (114) to (119). As

Table 31 shows, two of these features are comprised of demonstrative pronouns (DEM.PR) or demonstrative adverbs (DEM.ADV) carrying either an ablative or an allative case marking suffix. The third feature sees demonstratives carrying another suffix. Such features are described as demonstrative constructions in Australian linguistics and the same practice is followed here.

Table 31: Demonstrative affixes in the substrate languages

	Nunggubuyu[24]	**Marra**	**Alawa**[25]	**Ngalakgan**
'from here' **'from there'**	DEM.ADV- Ablative Case	DEM.ADV- Ablative Case	DEM.ADV- Ablative Case	DEM.ADV- Ablative Case
'to here' **'to there'**	DEM.ADV- Allative Case	DEM.ADV- Allative Case		DEM.ADV- Allative Case
Centripetal **Non-centripetal**	DEM.PR-*ala* DEM.PR-*ali*	DEM.PR-*nyingarr* DEM.PR-*nyindi*	DEM.PR.-*nyidi* DEM.PR-*nyagi*	DEM.ADV- Allative Case

(114) 'from there' construction in Alawa
yil–urlu–gunu yil–ajina
NC–there–ABL 3pl–come:PC
They were coming from there. (lit. *From there they were coming)* (Alawa, Sharpe 1972:78)

The 'source' form, 'from there', can be used in a special function, which can be translated as 'after that' or 'and then', either clause initially or as a clause connective. An example of both is provided in (115). This same syntactic construction is also reported in Nunggubuyu (Heath 1984:295).

(115) burru–yanh–yanah–miny . **gohje–wala** burru–ngey–ngey–miny
3pl–rdp–do.what.CV–root.PP **there–ABL** 3pl–rdp–get.up.CV–root.PP

gohje–wala burru–rabo, gohje Nanbirndene
there–ABL 3pl–go.PP there [place name]

They [thought about] what to do. Then/after that, they got up, then they went there to Nabirndene. (Ngalakgan, p.c. Brett Baker:16/2/2004)

(116) 'to here' construction in Ngalakgan
goykunh gu–∅–warlk nugu–manapurn yerrke–gah
here:ALL 3–3sg–go.in NC–echidna inside–ALL
The echidna goes inside (into the rock, or cave) here. (Ngalakgan, Merlan 1983:186)

[24] Heath (1983:309) makes a claim that *-ala* while operating like the ablative case suffix, *-wala*, on demonstrative adverbs is not in fact related to it. This seems improbable based on the patterns in the other languages and so it is here presented as an ablative suffix on demonstrative adverbs.
[25] Sharpe (1974:78) makes a claim that while there is a relationship between *-gunu* and the ablative case suffix that they are not the same. I suggest they are related, although further research is required.

(117) 'to there' construction in Marra
ya–lindu **wi–n.garra–yurr**
3sg–come **NC–there–ALL**
He is coming here. (lit. *He is coming to there*) (Marra, Heath 1981a:152)

There is also a 'centripetal' construction, which marks the direction of the motion towards the speaker and a 'non-centripetal' construction, which alternatively marks the direction of motion away from the speaker. Again these terms are used in Australian linguistics to describe these common construction types and the same practice is followed here.

(118) Centripetal construction in Marra
ni–n.garra–nyingarr
NC–this–CENTR
*Here he comes. (*lit. *in this direction)* (Marra, Heath 1981a:152)

(119) Non-Centripetal construction in Nunggubuyu

ana–nguru	**ya:–ni:–li**	ana:–ni nga	nguru–wugij
NC–nguru	**NC–this–NCENTR**	NC–this and.then	[tree sp.]–only

ana–wunumbi–ya:j	nga juy	nga	ranyjuga
NC–north–LOC	and.then go	and.then	[place name]

This Nguru (a tree species) is found north from here (Numbulwar), at the place Ranyjuga.
(lit. *This Nguru is from here, Nguru only to the north and then all the way to Ranyjuga.)*
(Nunggubuyu, Heath 1980b:427-428)

6.1.2 Reinforcement Principle and predictions

The previous section described the shared core features of demonstratives in the substrate languages; these are used to form the predictions presented below. First of all it was found that demonstrative pronouns can modify nominals, act as predicates or act as arguments. Similarly, demonstrative adverbs can also act as predicates. Neither of these features are distinct from the superstrate, English, however. It would therefore not be possible to determine whether such features, if found in Kriol, were a result of positive transfer or just acquisition.

Secondly, in developing the next two predictions, previous findings from this thesis must also be taken into consideration. A construction shared by all the substrate languages

sees demonstratives carrying ablative and allative case suffixes in specific constructions that are used commonly in discourse. It was shown in §4.2, however, that Kriol does not employ case marking, instead making use of prepositions. Evidence was provided in §5.3, on the other hand, to show that the shared core semantic categories encoded in case suffixes were transferred to the semantic roles of prepositions in the preceding pidgin, which have been retained in Kriol. Therefore, the equivalent of the ablative case is the source preposition in Kriol and, similarly, the equivalent to the allative case is the goal/location preposition in Kriol. As such E Feature 16 and E Feature 17 describe the expected demonstrative constructions with these prepositions. Finally, as previously noted Kriol is primarily isolating, like most creole languages, and as such independent morphemes would replace suffixes, although they are expected to be found in the same position in relation to the root. As such, E Feature 18, describes the expected centripetal/non-centripetal marker as a word that follows demonstrative pronouns.

Predictions based on demonstratives

E FEATURE 16:	The construction: [SOURCE DEM.ADV] that may be used as a temporal connective in narratives
E FEATURE 17:	The construction: [GOAL/LOC DEM.ADV]
E FEATURE 18:	Centripetal/non-centripetal marker that follows the demonstrative pronouns

It is expected that these features listed as predictions, if transferred, would have been in frequent use by NT Pidgin speakers in the Roper River region during levelling and therefore retained in Kriol.

6.1.3 In Kriol

The Kriol system of demonstratives includes both demonstrative pronouns and demonstrative adverbs and these are set out in Table 32.

Table 32: Demonstratives in Kriol

	Demonstrative Pronouns	**Demonstrative Adverbs**
PROXIMAL	*dijan*	*iya*
DISTAL	*darran*	*jeya*

Demonstrative pronouns can act as arguments as in (120) and (121).

(120) gardi, munanga garra luk-na **darran** jeya, yunmi garra
EXC munanga OBL see-EM **that** there 1du.in OBL

gu la got
go G/L court

Goodness, munanga will see that (one/carcass) there, (so) you and I will have to go to court. (C205)

(121) **dijan–na** det Mawulalan blein
this–EM DET [place name] plain
This (one/place) is that Mawulalan plain. (S177)

Demonstrative pronouns can also act as nominal modifiers, although it is not common and when used in this manner they provide particular emphasis or contrast of the nominal in question, as (122) shows.

(122) rait yumop garra but–um den–bai–den denbala langa **dijan**
alright 2pl FUT put–TM ten–by–ten ten G/L **this**

yat denbala langa **det** yat denbala langa
yard ten G/L **this** yard ten G/L

darran yat
that yard

Right, you (plural) have to put ten-by-ten, ten in this yard, ten in that yard and ten in that (other) yard. (S041)

Demonstrative adverbs, on the other hand, most commonly occur as adverbial elements, as in (123) and (124).

(123) en main dedi en main mami wi bin stop
TPC POSS father CONJ POSS mother 1pl.ex PST stay/live

jeya–na
there–EM

My father and my mother and I, we all stayed/lived there. (A028)

(124) wi bin **iya**–na ol aran dem hami mop
1pl.in PST **here**–EM PL around this:pl army GRP
We were here while all around (us) were those soldiers (army camps). (A084)

The demonstrative adverbs also occur in two other construction types, which are presented in Table 33 below.

Table 33: Demonstrative Adverbs in Kriol

	Source	**Directional**
Proximal	*brom iya*	*dijei* (centripetal)
Distal	*brom jeya*	*darrei* (non–centripetal)

The 'source' construction is a two word construction that often occurs clause initially when used with the distal demonstrative adverb, as in example (125). Example (126) shows its use as a temporal clause connector with the translation 'then'. It should be noted that this is an extremely common feature of narratives, particularly in travelling stories, whereby movement at different times is indicated from a source location outwards.

(125) **brom** **jeya** mindubala bin gu baj–im det
SRC there 1du.ex PST go pass–TM DET

mawulalan wodafal
[place name] waterfall

From there/then, we (two) went passed Mawulalan waterfall. (S176)

(126) wi git lif **brom** **jeya** gam–an iya langa
1pl.in get lift SRC there come–IMP here G/L

hodsendaun
[place name]

We got a lift, then came here to Hodgson Downs. (S135)

The proximal source construction most commonly occurs in the clause final position, as in (127).

(127) ai bin gu–bek **burrum** **iya**
1sg PST go–DIR **SRC** **here**
I went back from here. (A076)

Examples (128) and (129) show the use of the directional forms, which are used to indicate whether the movement can be thought of as centripetal or non-centripetal.

(128)

najing	no	skul	mela	bin	ap–um	lilbit	skul
nothing	NEG	school	1pl.ex	PST	have–TM	QUANT	school

barn.ga,	**darrei–na**	elsi
cousin/REC	**that:way–EM**	[place name]

We didn't go to school, we had (only) a little bit of school, cousin, that way (away from here) now at Elsey (Station). (D004)

(129)

im–in	gu–wei–na	det	wanim	wanbala	grik	im
3sg–PST	go–DIR–EM	that	what.is.it	one	creek	3sg

gu–ing–ap	**dijei**
go–PROG–DIR	**this:way**

He went away, to the whats-a-name, one creek that comes up this way (towards us). (C039)

In summary, demonstrative pronouns in Kriol can act as nominal modifiers and arguments and demonstrative adverbs act as adverbial elements in the sentence. More importantly, E Features 16 and 18 both appear to be found in Kriol, as there are [SOURCE DEM.ADV] and centripetal/non-centripetal constructions. E Feature 17, however, is not found in Kriol as there is no [GOAL/LOCATION DEM.ADV] construction.

6.1.4 Availability Constraints and other explanations

E Feature 16 – the construction: [SOURCE DEM.ADV] that may be used as a temporal connective in narratives – is found in Kriol. It is expected, therefore, that there have been no constraints on transfer. The source forms of demonstrative adverbs, *brom jeya* and *brom iya* are based on the perceptually salient two word constructions 'from there' and 'from here' in English. Consider these sentences.

They were going to Texas from here
They were going into the city from there.

These English source forms can also occur in the clause initial position.

From here, they were going to Texas.

From there, I travelled on to India.

As the following sentences indicate, however, the temporal connective construction is not found in English even though it occurs in Kriol, which provides further evidence that this is a case of negative transfer.

**He walked the dogs; from there he fed the cat.*
**She sang a song. From there she did a traditional dance.*

With no constraints on transfer it has been shown that transfer has most likely taken place from the substrate languages to the preceding pidgin in relation to the source demonstrative adverb construction. It is expected that the feature was then retained during levelling due to its high frequency among the substrate languages.

E Feature 17 – the construction: [GOAL/LOC DEM.ADV] – is not found in Kriol. The goal/location preposition in Kriol is *langa* or *la*. The closest semantic equivalent in English to the goal/location preposition is 'to'. There is already evidence that 'to' is not a perceptually salient feature because it was not selected as the base for the goal/location preposition in Kriol (see §5.3). In terms of a congruent construction, there must be in English a two word phrase, equivalent to 'to here/there' that differs from 'here/there' in much the same way as 'from here/there' does. Consider the following sentences in this way.

They are coming here.
**They are coming to here.*
They are coming from here.
We went there after school.
**We went to there after school.*
We went from there after school.

The use of 'from' alters the meaning of sentences which uses 'here' and 'there', whereas the use of 'to' does not and is therefore not used in English. It is suggested here, therefore, that because there is nowhere to transfer to in English, transfer of this feature to the preceding pidgin was constrained. It was therefore not available during levelling.

E Feature 18 – centripetal/non-centripetal marker that follows the demonstrative pronouns – is found in Kriol. The Kriol directional demonstrative adverbs are *dijei*,

which acts as a centripetal marker, and *darrei,* which acts as a non-centripetal marker. It is expected that there were no constraints on transfer of this feature. They are based on the perceptually salient forms, 'this way' and 'that way', in English and through substrate phonological pressure developed into *dijei* and *darrei*. Koch (2000) has previously found that two word utterances in English may be interpreted as lexicalised units, or in other words, one word. While Koch's (2000) analysis was on transitive markers and adjectives (which will be discussed in §6.2 below), it seems most likely to have occurred elsewhere as well. In this case, 'this/that way' may have been interpreted as a lexicalised unit in the preceding pidgin. The English construction is also found in congruent constructions, as in the following sentences.

He went that way.
We should go this way to get to the library.

It is suggested that with no constraints on availability of somewhere to transfer to, transfer of this feature was able to take place to the preceding pidgin. It was then retained during levelling due to its high frequency.

6.2 Adjectives

6.2.1 In the substrate

As Koch (2000:31–33) mentions, there has been much discussion as to why adjectives do not warrant classification as a word class in Australian linguistics and are, instead, classified as nominals along with nouns (Dixon 1980:272; Blake 1988:3). This analysis has now been well accepted and is used in current research such as Evans (2003:126), who also shows, however, that adjectives can still be distinguished from nouns by a number of morphological differences. The same is true of the substrate languages under study here. The discussion of adjectives in this section looks at the shared core features, including adjectival constructions and affixes used in conjunction with them.

All of the languages in question share certain characteristics in regards to adjectives, which occur in both attributive and stative verb constructions. Firstly, in referential

constructions adjectives may be used as attributive modifiers [N2] of another nominal [N1] in the following construction type: [N1 N2/ADJ] (e.g. Merlan 1983:81). There is, however, no fixed rule governing the position of the modifying nominal (e.g. Heath 1981a:64) as examples (130) and (131) show.

(130) anyji burr–ma gu–jandah **genggeng**
so/and 3nsg/3sg–get:TMA NC–stick **long**

nu–gunhbirri–hgin nugu–manapurn–hgun
NC–that–CASE NC–echidna–CASE

And so they get a long stick for that echidna. (Ngalakgan, Merlan 1983:185)

(131) burr–ma **genggeng** jandah mu–jurluh anyji
3nsg/3sg–get:PRS **long** stick NC–lancewood CONJ

burr–marninyh burr–jet, bur–jet–jet
3nsg/3sg–make:PRS 3nsg/3sg–singe:TMA 3nsg/3sg–singe:TMA–rdp

They get a long lancewood stick and make it, they singe it, they singe and singe it.
(Ngalakgan, Merlan 1983:185)

In this modifying role adjectives can also take noun class marking and case marking in agreement with the noun they are modifying, as in example (132) below. In fact, this is one of the main differences between adjectives and nouns, as most nouns inherently belong to one noun class or another whereas adjectives do not (Merlan 1983:32; Sharpe 1972:60).

(132) na–ni na–riyimarr–yurr **na–balwayi–yurr**
m.sg–DEF m.sg–man–LOC **m.sg–big–LOC**
'to the big man' (Marra, Heath 1981a:64)

Merlan (1983:81) also says that while each constituent can carry all the nominal trappings, as in (132), it is more likely that only the head noun will do so, as in examples (130) and (131) above.

Koch (2000:32) has previously discussed how adjectives can also function as arguments in regards to Ngiyampaa, a language of New South Wales. The same is so with the substrate languages surrounding Roper Kriol (Merlan 1983:80; Heath 1984:152), as example (133) shows.

(133) ju–gunhbirri bolohbolo–yih ø–lerrh–miny **ngolko**
NC–that woman–CASE 3sg/3sg–light.fire–root:PP **big**
That woman has lit a big fire. (lit. *that woman has lit a big (one)*) (Ngalakgan, Merlan 1983:75)

Adjectives also occur as stative verbs in all the languages, such as in (134). The adjective in this sentence is clearly identified as acting as a stative verb as it takes the pronominal prefix (see §3.3).

(134) nga–balwayi
1sg–big
I am big. (Marra, Heath 1981a:66)

This is another main difference between nouns and adjectives; the latter are far more likely to take verb morphology than the former. Heath says (1984:152) this is why sentence (135a) is possible, while (135b) is not in Nunggubuyu.

(135) a. wu–runggal
3sg–big
It is/was big.

b. *wu–wurugu
*3sg–pond
**It is/was a pond.* (Nunggubuyu, Heath 1984:152)

There is a significant difference, however, between the two language families, as to the use of adjectives within the verb complex, particularly relating to coverbs (see §3.4). In terms of the Marran languages, it appears that a substantial number of adjectives, including colour and human attribute terms, may come under the word class of coverbs. For example, sentence (136a) shows the unmarked form of the adjective, *gulg* 'heavy', functioning as a coverb. Sentence (136b), on the other hand, shows the same adjective carrying the nominaliser suffix, hence functioning as a derived nominal.

(136) a. ruwu **gulg–n–eni**
tree **heavy.CV–3sg–be:TMA**
The tree is heavy. (lit. *Tree heavy it is.*)

b. ruwu **gulg–mayin**
tree **heavy–NOM**
The tree is heavy. (Alawa, Sharpe 1972:100)

This type of adjective does not appear to occur without either the root verb or the nominaliser suffix. Example sentences in (137) show it is the same case in Marra.

(137) a. **wag–u–mindini**
black.CV–3sg–root:TMA
It was black. (Marra, Heath 1981a:284)

b warrnggu wu–wayinggarli na–warduwardu warrnggu
until 3sg/3sg–hit.with.thrown.object NC–liver until

nangga–ya **wag–min**
NC–that **black–NOM**

Then it (eaglehawk) threw the liver at it (so that it splattered all over it), until it (crow) was black. (Marra, Heath 1981a:380)

It seems that defining this class of adjectives as coverbs is warranted because they only function as nominals when carrying the nominaliser suffix. Further research is required to determine whether the nominaliser suffix is productive.

In the Gunwinyguan languages, however, adjectives can occur in the verb complex, although they do not require any suffix to then function as nominals. Adjectives, therefore, can function as predicates, like other nominals in these languages. A favoured means of using adjectives as stative verbs in the Gunwinyguan languages is to attach either an inchoative or the factitive verb root form (Merlan 1983:34; Heath 1984:34), which carries the TMA content and therefore acts as the finite verb root form. As the example provided in (138) shows, the adjectives are also then occuring in the coverb position.

(138) a. wu–**runggal**–many
3sg–**big**–INCH:TMA
It became big. (Nunggubuyu, Heath 1984:395)

b niwu–**runggal**–wany
3sg–**big**–FACT:TMA
He made it big/He enlarged it. (Nunggubuyu, Heath 1984:152)

Although adjectives in Ngalakgan and Nunggubuyu do not require a suffix in order to then function as a nominal, there are the nonproductive forms: *–yih* in Ngalakgan (Merlan 1983:125) and *–j* in Nunggubuyu (Heath 1984:484). Heath (1984:484) provides the following examples of phrases.

(139) a. ngalngala– → ngal–ngalngalu–j
white rdp–white–NOM
white *white, shiny, bright* (Nunggubuyu, Heath 1984:484)

b.	mingi–	→	mingi–minga–j
	lazy		rdp–lazy–NOM
	lazy		*lazy*

These word final forms are found on colour terms and adjectives relating to inherent, usually human, qualities, although they are not productive suffixes.

It is clear, therefore, that the shared stative verb constructions involving adjectives are those where the adjective may simply take the pronominal prefix to act as a stative verb and those where the adjective may act as a coverb or a predicate, which takes other expected verb morphology. Furthermore, two of the four languages employ a derivational suffix on colour and human attribute adjectives that can function as coverbs in order to derive nominals. The remaining two languages also employ colour and human attribute adjectives within the verb complex and while there is some evidence of a word final form on such adjectives when being used as nominals, it is no longer a productive suffix.

There also appears to be a relationship between adjectives and adverbs in all the substrate languages. In the Marran languages there are suffixes that when applied to adjectives derive an adverb. In Alawa for example the suffix *–ji,* or its variants, carries out such a function, as shown in example phrases in (140).

(140) a ngaygan–ji
strong-ADV
strongly

b yumarr–i
good–ADV
well (Alawa, Sharpe 1972:134)

There is a similar construction in Marra, although Heath (1981a:287) found few examples.

In the Gunwinyguan languages, however, the use of the related suffixes is more marginal. In Nunggubuyu, for example, the genitive case suffix *–yinyung* '...is added more or less gratuitously to an adverbial noun which indicates time of day or season of year' (Heath 1984:215). An example is provided in (141).

(141) ni–yangga–ya–nggi: **ana:–rrarra–yingung**
3sg–go.along.CV–go–PST **NC–day(time)–GEN**
He went along then in the daytime. (Nunggubuyu, Heath 1980b:318)

A similar situation exists for the suffix in Ngalakgan, *–ji*, which means 'during the time when' and can therefore be added to seasonal terms (p.c. B. Baker 16/5/03).

All the suffixes previously mentioned are summarised in Table 34.

Table 34: Adjective suffixes in the substrate languages

	Alawa	Marra	Ngalakgan	Nunggubuyu
Nominaliser (CV->ADJ)	*–mayin*	*–min*	*(–yih)*	*(–j)*
Adverbial (ADJ->ADV)	*–ji/–Ci*	*–ya/–yi*	*(–ji)*	*(–yinyung)*

Koch (2000:31) says that while there is no inflection for degree of comparison on adjectives in south-east Australian Aboriginal languages, he cites Donaldson (1980:70) who says they can be reduplicated to indicate more or less. This is another means of differentiating between nouns and adjectives in those languages, in that nouns cannot be reduplicated. The same process has been found in the substrate languages of the Roper River region. It appears that reduplication is a common process to express a greater level of intensity of adjectives as in example (142).

(142) rugularra → rugugalarra
long *very long* (Alawa, Sharpe 1972:61)

Ngalakgan, however, also employs a range of prefixes and suffixes as qualifiers. Merlan (1983:65) says that there are three degrees of nominal and adverbial intensity expressed through the use of *marr–* and *–bindi*. The following example in (143) shows a great level of intensity on an adjective acting as a predicate.

(143) **mungu–namulu–∅–ma:h–bindi** mun.gu–garnamurru
NC–really–3sg–good–real NC–long.nose.wild.bee
That wild honey (from the long-nosed bee) is really extraordinarily good. (Ngalakgan, Merlan 1983:61)

Further research is required within the other substrate languages to determine whether they have similar features and how they operate.

6.2.2 Reinforcement Principle and predictions

The shared core substrate adjective features, discussed in the previous section, can be expected to have been retained in the preceding pidgin. The following predictions can therefore be made. It can be expected that adjectives acting as arguments, nominal modifiers and stative verbs (E Feature 19) would have been retained in the preceding pidgin because all four substrate languages use adjectives in these ways. Similarly, adjectives undergoing reduplication as a means to express qualification and intensity (E Feature 22) would also have been retained during levelling because this is a feature of all four substrate languages. The nominaliser suffix (E Feature 20) and adverbial suffix (E Feature 21) are features predominantly found in the Marran languages. The Gunwinyguan languages display features that show evidence of once performing in similar ways but they are now unproductive. If there was no evidence of such features in the Gunwinyguan languages, a Not Expected prediction would have been made. It is suggested therefore, that if availability constraints allowed for their transfer then these shared core features of the adjectives would have been in frequent use by the developing NT Pidgin speakers, providing a better chance of retention during levelling.

Alternatively, Ngalakgan is the only language that displays pre and postadjectival nominal features to denote degrees of intensity (NE Feature 5) and as such it is not expected to have been retained during levelling, if indeed it transferred at an earlier stage of pidgin development. All the previous predictions are summarised below.

It should be noted no prediction is made as to the expected construction type of adjectives acting as stative verbs. This is because it was previously shown in §3.3 and §5.1 that Kriol does not employ pronominal prefixes and in §3.4 that Kriol does not employ a coverb construction. It has also been discussed in previous prediction lists that the reason

that affixes are replaced by words in predictions is that Kriol is predominantly an isolating language. The word in question may still be expected to occur in a similar position in relation to the root, as the affix would, but the affix itself would not be expected. Predictions in this list have been suitably modified in these ways.

Predictions based on Adjectives

E FEATURE 19:	Adjectives acting as arguments, nominal modifiers and stative verbs
E FEATURE 20:	Postadjectival marker [ADJ NOM → N/ADJ] used as arguments or stative verbs denoting colour or inherent characteristics.
E FEATURE 21:	Postadjectival adverbial marker [ADJ ADVL → ADV]
E FEATURE 22:	Reduplication used on adjectives to denote qualification and intensity.
NE FEATURE 5:	Pre or postadjectival markers to denote degrees of intensity.

6.2.3 In Kriol

Sandefur (1979:100) suggests that adjectives and nouns are not easily distinguished in Kriol. The same has been found in this analysis, which allows both to be described as nominals, although there are important differences. For example, both nouns and adjectives can modify another noun in the construction type: [ADJ/N2 N1]. But while nouns can occur in either modified [N1] or modifying positions [N2] in a nominal modifying construction, adjectives can only occur in the modifying position [N2], as examples (144) and (145) indicate.

(144)

det	**lil**	beibi	bin	onli	basawei	dru	
DET	**little**	baby	PST	LIM	pass.away	true	

The little/small/young baby just passed away, it is a true story. (C113)

(145)

det	lil	beibi	bin	oldei	bomit–na,	**grin**	bomit	im
DET	little	baby	PST	CONT	vomit–EM	**green**	vomit	3sg

regen
say/think

The little baby was vomiting (over and over), green vomit he/she said. (C111-112)

Another difference between adjectives and nouns is that there are constructions that occur only with adjectives, which are summarised in Table 35. The adjectival marker (ADJL) is used extensively when adjectives are functioning as just that, adjectives, or as stative verbs, although it is not productive as such. Its functions are more fully described below. The nominaliser marker (NOM) is also not thought to be productive and occurs when adjectives are functioning as nouns or stative verbs. The adverbial (ADVL) may be productive as adjectives act as adverbial elements when accompanied by this form.

Table 35: Adjective constructions in Kriol

Description	Construction	Form
Adjectival (ADJL)	(ADJ ADJL → Stative V/ADJ)	*wan*
Nominaliser (–NOM)	(ADJ–NOM → N/ADJ)	*bala*
Adverbial (ADV)	(ADJ ADVL → ADV)	*wei*

The bulk of adjectives in the data are followed by the adjectival marker, although the precise function of it is difficult to determine. Adjectives followed by the adjectival marker can, for example, occur in the modifying role as in (146), although as example (145) above shows, its application is not obligatory.

(146) yu baj–im–ap det **grin** **wan** gap la mi
2sg pass–TM–DIR this **green** **ADJL** cup G/L 1sg
(You) pass the green cup to me. [T03:8T11]

Adjectives followed by the adjectival marker can also occur as arguments, as shown in (147).

(147) dijan gap bla yu, darran jeya main **ret** **wan**
this cup P/P 2sg that there POSS **red** **ADJL**
This cup is yours, that there is my red (one). [T03: 8T11]

Adjectives that are followed by the adjectival marker can also act as stative verbs, functioning as the main verb, as in (148) and (149).

(148) wen ai bin yanggel mela **bin** **lil** **wan**
when 1sg PST young.girl 1pl.ex **PST** **little** **ADJL**
When I was (a) young girl, we (but not you) were little. (D001)

(149) esda **bin** **onli** **smol** **wan**
[personal name] **PST** **LIM** **small** **ADJL**
Esther was (only) small. (C189)

We can see that these are stative main verbs as they characteristically take the TMA marking, which is the criteria used in pidgin and creole studies, such as the past tense marker *bin* in (148), or also with the Limitational aspect marker in (149). Once again the adjectival marker is not obligatory in this role, as shown in the following example that employs another auxiliary verb construction.

(150) main dedi bin **git** **sik–en–grenggi** la het
POSS father PST **INCH** **sick–and–cranky** G/L head
*My father became mentally ill (*lit. *sick and cranky in the head*). (C002)

Another predicate construction involving the adjectival marker occurs as a relative clause, as in examples (151) and (152) and in both cases this analysis is supported by prosodic features within the data.

(151) en wan yanggel mela bin deik-im burrum–iya o
TPC one young.girl 1pl.ex PST take-TM SRC–here EXC

gut gel du ril **burdi** **wan**
good girl EMPH QUAL **pretty** **ADJL**

We took a young girl from here, oh (she was) a good girl too, (who was) really pretty.
(A133)

(152) wi bin gat–im–at olda wina **big** **wan**
1pl.in PST cut/divide–TM–DIR PL weaner **big** **ADJL**

bikwan–na
rdp–EM

We cut out (divided apart) all the weaners, that had become really big now. (S234)

The adjectives in the subordinate predicate constructions are not marked for TMA, as it is implied that they carry that of the main verb complex preceding it. It appears that the adjectival marker is obligatory in this construction type.

The nominaliser marker is restricted in use, occurring with adjectives denoting predominantly human qualities and colour terms. The majority of cases are frozen form nouns, most likely based on the same construction at an earlier stage of development.

Those evident in my data are *blekbala* 'Aboriginal person', *yelabala* 'person of mixed ancestry' and *bobala* 'poor thing'. Two examples follow in (153) and (154).

(153) hei wot yu luk–ing–at–bat, maiti **blekbala**
EXC INT 2sg look–CONT–DIR–CONT POSS **Aboriginal.person**

ai regen
1sg think/reckon

"Hey, what are you looking at?" Maybe an Aboriginal person I reckon. (C242)

(154) **bobala** dei bin gil–im det gel langa grik
poor.thing 3pl PST kill–TM DET girl G/L creek
Poor thing, they killed that girl at/in the creek. (A135)

There are also a number of frozen form temporal terms or numbers, as in the following examples, which also seem to carry the nominaliser marker, although is not obligatory in such cases. The examples from my data are: *erli* 'early', *dak* 'dark', *wan* 'one' and *den* 'ten'.

(155) ei yumop garra git–ap **erlibala** let–im–at
EXC 2pl OBL get–DIR **early.morning** let–TM–DIR

dem buligi
this:pl cattle

"Hey, you (plural) have got to get up early (in the morning) and let out these bullocks". (S269)

(156) wi bin drak–im **denbala** fes daim
1pl.in PST truck–TM **ten** first time
We trucked (put in the truck) ten the first time. (S045)

Example sentences (157) and (158) show that adjectives followed by the nominaliser marker also function as stative verbs. TMA marking, once again, confirms their use as main verbs.

(157) wal ai bin onli **yang** **bala** den
TPC 1sg PST LIM **young** **NOM** then
Well, I was only young then. (S027)

(158) im **sili** **bala,** im–in lip–um du
3sg **silly/stupid** **NOM** 3sg–PST leave–TM also
He's stupid, he left her too. (A140)

In summary, it appears that Kriol predominantly employs the *wan* marker after adjectives, and, to a lesser degree the *bala* marker, particularly on frozen form nouns.

Koch (2000:29) makes the comment; 'Kriol has more-or-less indiscriminate use of variants *ADJ-bala*, *ADJ-wan,* and *ADJ* in attributive and predicative functions'. The presentation of data in this section suggests that while the roles or functions for each marker remain ill defined, there are some patterns that have emerged. The *wan* marker can be used after adjectives acting as an argument or nominal modifier, or when an adjective is acting as a stative verb or subordinate predicate. It appears then that E Feature 19 – adjectives acting as arguments, nominal modifiers and stative verbs – is found in Kriol. The *bala* marker also seems to operate with adjectives acting as arguments and stative verbs. The words that occur with this marker, however, are a restricted set, usually related to colour and human attributes, and many of them are frozen form nouns. While further research is required on this topic, it appears that E Feature 20 – postadjectival nominaliser marker [ADJ NOM → N/ADJ] used as arguments or stative verbs denoting colour or inherent characteristics – is also found in Kriol.

The Adverbial construction is shown in the examples following in (159) and (160).

(159)	wi	bin	sit–ing–dan	deya	rili	**gut**	**wei**
	1pl.in	PST	sit/live–PROG–DIR	there	QUAL	**good**	**ADVL**

We were living/staying there properly (in the most good way). (C071)

(160)	o	nomo	weist–im	daim,	im–in	lilbit	**long**	**wei**
	EXC	NEG	waste–TM	time	3sg–PST	QUAL	**ADJ**	**ADVL**
	yuno							
	INT							

"Oh don't waste time", it was a fairly long way (to go), you know. (S183)

It can be seen, therefore, that E Feature 21 – postadjectival adverbial marker [ADJ ADVL → ADV] – is also found in Kriol.

The final difference detected between nouns and adjectives in Kriol is that adjectives can be qualified either by the process of reduplication or with one of the following qualifiers:

lilbit – 'a bit'
ril/rili – 'quite a bit'
brabli – 'very much'.

An example of reduplication is provided in (161), which shows that its use with an adjective increases the intensity of its meaning.

(161) bik–im–at olda glos blenggit but het **nyu** **wan** **nyuwan**
pick–TM–DIR PL clothes blanket boot hat **new** **ADJL** **rdp**
Choose all the clothes, blankets, boots and hats, they were all brand new! (S303)

Examples of *ril* are provided in examples (151) and (159) above. An example of *brabli* is provided in (162).

(162) wan munanga bin jeya **brabli** **jemat** **bala**
one non.Aboriginal.person PST there **QAUL** **smart** **NOM**
A whitefella was there, (who was) very intelligent. (A087)

There are other forms, which at first appeared to be qualifiers although they were later found to operate as adjectives. For example, sentence (144) above shows the use of *lil* as an adjective modifying a noun, and example (148) above shows its use with an adjectival marker following. The same is shown in regards to *biges* in the following two examples. While (163) shows its use as a qualifier, (164) shows that it can also be followed by the adjectival marker and act as a stative verb, just as other such adjectives.

(163) dei bin ap-um **biges** hami gemp
3pl PST have-TM **big** army camp
They had a very large army camp. (A086)

(164) **biges** **wan** mein gemp dei yusdu gemp deya
big **ADJL** main camp 3pl HAB camp there
At the biggest main camp, they used to camp there. (C225)

It can be seen, therefore, that E Feature 22 – reduplication used on adjectives to denote qualification and intensity – has been found in Kriol, as has NE Feature 5 – pre or postadjectival markers to denote degrees of intensity. All the expected features, have therefore, been found in Kriol, although a feature that was not expected was also found. The availability constraints may help explain the results.

6.2.4 Availability Constraints and other explanations

In this section it is necessary to present previous research on this topic, particularly in relation to adjectival features in Kriol, prior to discussing the availability constraints.

Firstly, *bala* is a multi-functional form, noted in Melanesian Pidgin by Keesing (1988:12). Baker (1993) then developed a list of functions of *bala* presented by Koch (2000:28), which are:

a) with colour adjectives to form ethnic label lexemes ...
b) with demonstratives 'that' and 'this' to form demonstratives, which may also function as third person singular pronouns.
c) with adjectives to act as a nominal modifier in relation to a N following it ...
d) with cardinal numerals
e) with pronouns to indicate plurality.

As shown in §5.1, e) is found in Kriol, although modified due to Roper River substrate influence to indicate the Unit Augmented category of pronouns. It was also shown in §6.2.3 that function d) is also found in Kriol, although numbers appear to function as frozen form nouns rather than as adjectives. Function c) is not, however, found in Kriol. Although adjectives with the *wan* marker can modify a nominal or it is more likely for adjectives to be unmarked in this role. It is interesting to note from §6.1 that function b) is also not found in Kriol. The Kriol demonstratives have been shown to be formed by lexical units equivalent to 'this one' and 'that one', ultimately becoming *dijan* and *darran.* Finally, this returns us to function a), which has been shown in the previous section to be found in Kriol, although once again these 'ethnic label lexemes' (Baker 1993) are now classified as frozen form nouns rather than adjectives and the process extends to other lexemes, such as the sympathy marker *bobala.*

Baker (1993) compared this feature list to archival data from Melanesia and Australia, which resulted in the suggestion that all of them originated in Australia. In §5.1.4, function e), for example, is shown to have first originated in either New South Wales or Queensland and the same has been found for all other functions. The earliest attested examples for each feature in the list, taken from Baker (1993) or Koch (2000), are shown in Table 36 below.

Koch's (2000:34) discussion of the *bala* feature further suggests that those first attested in Queensland may already have been in use in New South Wales in the 1830s, influenced perhaps by New South Wales substrate languages such as Ngiyampaa. If so, it

is reasonable to expect that there were no constraints on transfer of substrate features in that environment. First of all, it appears that there was a perceptually salient form in English that could provide 'somewhere to transfer to' for the characteristics of the ADJ *bala* feature. As Koch (2000:30) says: '...I believe it is a fair assumption that the construction *ADJ fellow* was very common in colonial English, with *fellow* referring to a sufficiently identified referent, typically but not exclusively animate'.

Table 36: Earliest attested examples of *bala*

Feature	Year	State	Example
a) 'ethnic label lexemes'	1801	NSW	no example provided
b) demonstratives	1842	QLD	*There along o'that fellow tree*
c) [ADJ fellow/fella N]	1842	QLD	*where big fellow water sit down?*
d) numbers	1849	QLD	*I threw him down one fellow compass somewhere here*
e) pronouns	1866	QLD	no example provided

Koch (2000) also discussed the notion of the 'lexicalised element' in which a two word English utterance may be interpreted as a single lexical item. Koch (2000:30) notes, for example, that feature c), the [ADJfellow N] construction, is 'un-English like'; a claim supported in the following sentences.

**I bought the brown fellow (fella) shoes.*
I bought the brown shoes.

Koch (2000:33) then makes the following claim:

> We argued above that the English noun phrase 'ADJ fellow' would have been reanalysed as a single word 'ADJpela'. We now add the claim that it was assigned to a word class Nominal (i.e., undifferentiated Noun/Adjective), according to the grammar of ALs [Australian languages]. Now since in ALs a Nominal could occur either alone in an NP [noun phrase] or in an [N N] construction, where one N modified the other, this pattern was imitated in the grammar of the emergent pidgin. In the application of this grammar new N N collocations were naturally generated which involved 'ADJpela' as the modifier, preceding the modified as in the English order.

I would also suggest that forms with ADJpela could function as stative verbs, another function of nominals in most Australian Aboriginal languages. Koch's description is important in this section, in two ways. Firstly, it suggests that the *bala* functions developed in New South Wales and were influenced by substrate languages in that state. As such, it can be said that the *bala* feature was first transferred as a lexical unit. This feature could then have spread to either the Northern Territory or Melanesian contact languages. It was then diffused from NSW/QLD Pidgin to NT Pidgin with three of its roles intact (a), d) and e)), which may have been analysed as nouns. This may help explain why numbers, colours, 'ethnic label lexemes' and other forms involving *bala*, are now treated as lexicalised frozen form nouns by Kriol speakers and are not used as nominal modifiers. They were features of the NSW/QLD Pidgin that spread into the Northern Territory and were furthermore learnt as lexical units in the developing NT Pidgin, without any scope for productivity or substrate influence at that level. So, while E Feature 20 – postadjectival marker [ADJ NOM → N/ADJ] used as arguments or stative verbs denoting colour or inherent characteristics – is found in Kriol, it is not thought to be due to substrate influence in the Roper River region, but rather substrate influence in New South Wales.

If forms with *bala* were interpreted as frozen form nouns, then another marker may have been required for use on adjectives, even if they were still required to operate like other nominals in the Roper River substrate languages. As previously noted the Roper River substrate languages are the same as other Aboriginal languages in Australia in classifying nouns and adjectives as the same word class of nominals (see e.g. Dixon 1980). As noted in the previous section, E Feature 19 – adjectives acting as arguments, nominal modifiers and stative verbs – is found in Kriol, and the alternate form that occurs on adjectives in Kriol is *wan*. As such it is expected that there was no constraint on the substrate feature transfer just listed to *wan.*

Firstly, there is a perceptually salient form on which to base *wan*, namely 'one', which can be used in congruent constructions in English. Consider the following sentences:

Give me the yellow one.

You've got to watch the quiet ones.
The red ones are ripe.
Your baby is the happy one.

In order to prove that the feature specifications of E Feature 19 were transferred from the substrate languages, they must be shown not to have also been English features. Otherwise they could simply be borrowed features from English. Firstly, English does not allow adjectives to function as arguments, as the following sentences show:

**The happy was smiling.*
The happy girl was smiling.

Secondly, while adjectives can act as nominal modifiers in English, constructions involving 'ADJ one' cannot, as the following sentences show.

I wish I had a red car.
**I wish I had a red one car.*

Thirdly, there are constructions in English, which are apparently while congruent with the substrate languages construction where adjectives are acting as stative predicates as in the first sentence below. However, the corresponding construction in English that employs either 'ADJ one' or 'ADJ fella' is in fact still nominal in nature. Consider the following sentences in this way.

He's tired.
You're a funny one.
John's a tall fella.

It is suggested, therefore, that there was no constraint on transfer of any of the three feature specifications in relation to E Feature 19, and as such these feature specifications were transferred to the preceding pidgin. Due to its high frequency, this complete feature was then retained during levelling.

E Feature 21 – postadjectival adverbial marker [ADJ ADVL → ADV] – is found to occur in Kriol. Koch (2000:28 taken from Baker 1996:533) included under c) of the *bala* feature '...clause finally, as an adverbial formant'. It was shown in the previous section that such clause final adverbial constructions do occur in Kriol. The expected feature here, however, is also a productive process that derives adverbs, not restricting their

position in a clause. In Kriol *wei* is used in this manner. The fact that this feature exists in Kriol, as predicted, suggests that there were no constraints on transfer. There is, for example, a perceptually salient form in English, 'way', which is used in congruent constructions. Consider the following sentences.

He travelled a long way.
They did it the hard way.
The kangaroo jumped sideways.

As there were no constraints on transfer this feature then transferred to the preceding pidgin. Its frequency among the substrate languages then allowed the feature to be retained during levelling.

E Feature 22 – reduplication used on adjectives to denote qualification and intensity – is found in Kriol. As described in the previous section, there is a similar construction in Kriol that involves adjectives, which makes use of reduplication to qualify the level of intensity of the adjective. Reduplication was previously discussed in §3.1 in relation to progressive aspect marking, where it was noted that because this feature is a process rather than form, the availability constraints do not apply. The existence of reduplication on adjectives in Kriol does, however, indicate that substrate transfer may have taken place.

NE Feature 5 – pre or postadjectival markers to denote degrees of intensity – is also found in Kriol, which employs prenominal markers to qualify adjectives in a three level system. The three most commonly used lexemes are *brabli, rili* and *lilbit*, which are based on the forms, 'properly', 'really' and 'little bit' in English. These lexemes are also generally used in congruent constructions in English as the following sentences show.

She's a proper lady.
That road is really rough.
The skirt is a little bit big.

Yet the question remains whether the Not Expected feature is distinct from English. The only difference may be that the substrate language feature includes only three degrees of intensity, whereas English is not as limited. Apart from that the feature appears to be the

same in Kriol as in English. There is not enough evidence, therefore, to suggest that the existence of this feature in Kriol is due to substrate transfer, although further research is still required. At this stage it appears that the inclusion of this feature in Kriol is either due to 'positive' transfer, whereby there is an overlap between the substrate and superstrate languages' feature, or that it was borrowed from English.

6.3 Possession

6.3.1 In the substrate

There are numerous and complicated alternatives for marking possession in the Roper River substrate languages. Once again only the shared core strategies are identified and discussed in this section, namely: genitive case marking, the use of genitive pronouns and appositional constructions. Two of these possession marking alternatives are presented in Table 37 with example sentences and a further discussion to follow.

Table 37: Summary of core possession marking strategies in the substrate languages

	Ngalakgan	**Nunggubuyu**	**Alawa**	**Marra**
Genitive Case	*–hgVn*	*–yinyung*	*–yija*	*–∅*
Genitive pronouns	pronouns + Genitive/Dative Case	pronouns + Relative Case (REL)	Indirect pronouns used for Genitive	Pronouns + *–∅* Genitive Case

Genitive case (GEN) marking is the primary means to mark possession if the possessor is a nominal, as shown in (165). Genitive pronouns, which in two of the four languages are also formed with a genitive suffix, are the primary means to mark possession if the possessor is expressed in pronominal form, as shown in (166).

(165) jalguyi–**ja** barragarl nyurd–nyurd
young.man–**GEN** spear blunt–rdp
The young man's spear is blunt. (Alawa, Sharpe 1972:63)

(166) ngaykarnih–**gin** ngu–mu–bareny mu–may–ngini
1sg–**GEN** 1sg–3sg–hang.up:PP NC–vegetable.food–mine
I hung up (i.e. off the ground) *my food.* (Ngalakgan, Merlan 1983:72)

Heath (1981a:136) notes that 'genitive pronouns may follow or precede their modified nouns; if they precede them the noun usually does not take an article....'

There is another construction that can superficially resemble possession in all the substrate languages, which is the Whole Part relationship expressed by apposition (Merlan 1983:82; Heath 1984:548; Sharpe 1972:63; Heath 1981a:65), as shown in example (167).

(167) dany–dany–jil–i **birrimil–di** **girrib–irr**
rdp–slice.CV–3pl–root:PST **should.blade–LOC** **kangaroo–LOC**
They sliced it with a kangaroo blade. (Alawa, Sharpe 1972:64)

In three of the four languages case concord is also used in constructions dealing with possession and kin terms (Merlan 1983:68; Heath 1984:549; Heath 1981a), as shown in example (168). Yet this construction is typical of nominal modification in general and is not a possession marking strategy as such.

(168) nga–ya–nggi **nugawi–wuy** **nani–nyarra–wuy**
1sg–go–PST **2sg:GEN–ALL** **NC–father–ALL**
I went to your father. (Nunggubuyu, Heath 1984:549)

Finally, there is another alternative possession marking construction in Ngalakgan. The central means of expressing possession in that language is through what may be described as 'pronominal possessive suffixes' applied to the possessed nominal, as in example (169).

(169) nu–geywarr–yih ∅–nani–hmolk nugu–gony ngayu
NC–young.man–ERG 3sg/3sg–see:TMA–PNEG NC–kangaroo but

bolohbolo–nowi–yih jalgah ∅–mehme
woman/wife–his–ERG alright 3sg/3sg–get:TMA

The young man didn't see (any) kangaroo but his wife got (something) alright. (Ngalakgan, Merlan 1983:73)

This example also shows that the possessor may not be cross-referenced elsewhere in the clause, as well as the fact that the nominal form with 'pronominal possessive suffix' can also take case marking.

6.3.2 Reinforcement Principle and predictions

Based on the reinforcement principle of frequency we can expect that the shared core possessive marking strategies in the substrate languages would be in use the most by NT Pidgin speakers if transfer was allowed. They would, therefore, have the greatest chance of retention during levelling to remain in Kriol. In this case the shared core features of possession marking in the substrate languages are as follows: genitive case used on the possessor nominal and Whole Part possession is indicated by apposition of nominals. Two of the four languages also use the genitive case suffix on possessor pronouns. There is also one feature only in evidence in one language; the pronominal possessive suffixes on nominals in Ngalakgan. Due to its low frequency this feature is expected to have been lost during levelling.

Before presenting the predictions for this section, two points require reiteration. First, while there has been discussion of case marking in the substrate languages in the previous section it was found in §4.2, however, that there is no case marking in Kriol, which relies instead on prenominal prepositions. It was further shown in §5.3 that prepositions in Kriol have the same semantic roles as the shared semantic roles of the case suffixes in the substrate languages, which includes a category of possession. Second, as shown throughout this thesis, Kriol is not likely to employ affixes, although making predictions with regard to the position of a feature in relation to the root, assists the discussion of congruence. The following predictions can therefore be made.

Predictions based on possession

E FEATURE 23:	Prenominal possessive preposition used with following possessor nominal, and possibly pronoun.
E FEATURE 24:	Whole Part relations indicated by apposition
NE FEATURE 6:	Postnominal 'pronoun possessive' marker

It is expected, therefore, that if the E Features had previously been transferred to the preceding pidgin that they would then have been retained during levelling and be present

in Kriol. Alternatively, it is expected that even if the NE Feature previously transferred it would not have been retained in the preceding pidgin due to its low frequency.

6.3.3 In Kriol

There are three ways to mark possession in Kriol. 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. It should be noted that the semantic notions of 'ownership' and 'possession' differ substantially between Aboriginal and non–Aboriginal society. In the latter 'ownership' is highly restricted and where it applies there is usually a particularly close relationship implied between the possessed and possessor. The possession/purpose preposition *blanga* is used to indicate the semantic role of possession on any nominal type and pronouns. These techniques are listed in Table 38 with examples following.

Table 38: Kriol possession marking strategies

Type	Construction	Example
1sg Possessive Pronoun	[*main/mai* Nominal] = [possessor possessed]	*main hasben* (D024) 'my husband' *mai fren* (S106) 'my friend'
Possession/Purpose preposition	[N *blanga* Pro or Nominal] = [possessed preposition possessor]	*drak blanga im* (A050) 'his truck' *bos bla melabat* (S022) 'our boss' *bos bla ami* (A093) 'army boss'
Appositional constructions	[2or3sgPro or 'personal name' Nominal] = [possessor possessed]	*im biligen* (S206) 'his billycan' *shila fatha* (C011) 'Sheila's father' *yu gabarra* (Sandefur 1979:89) 'your head'

These possessive marking strategies can be utilised in the one sentence as example (170) shows.

(170) ol **mai greni mop** en **main mami hanggul**
COLL **POSS grandmother/MM/MMB GRP** CONJ **POSS mother uncle**

bin	hiya	en	**mami**	**blanga**	**im**	hiya–na
PST	here	CONJ	**mother**	**P/P**	**3sg**	here–EM

All my grannies, including my mother's uncles, were here and his/her mother was here too. (A053)

The first person singular possessive pronoun can be used on any possessed nominal type, as suggested in examples (171) and (172).

(171)

main	**mami**	bin	gemp	garra	mela
POSS	**mother**	PST	camp/sleep/stay	I/A	1pl.ex

My mum stayed/camped with us. (D019)

(172)

wal	ai	dal	yu	**mai**	**stori**
well	1sg	tell	2sg	**POSS**	**story**

Well I (will) tell you my story. (A001)

There is only one instance in my data where the possessive pronoun follows the nominal, which is shown in (173).

(173)

ol	yu	bois	garra	baj–im–ap	**hosis**	**main–na**
COLL	2sg	men	OBL	collect/gather–TM–DIR	**horses**	**POSS–EM**

All you men have to/must round up my horses. (A130)

It is thought that this construction may be used for emphasis, supported by the inclusion of the 'emphatic' marker.

As previously described in §5.3, the possession/purpose preposition is used to indicate possession, as well as purpose, as shown in (174).

(174)

bat	ola	**hos**	**bla**	**mindubala**	**bla**	**werk**	la	bush
CONJ	COLL	**horse**	**P/P**	**1du.ex**	**P/P**	**work**	G/L	bush

dei	bin	la	bik	sdokgemp	mop
3pl	PST	G/L	big	stock.camp	GRP

But all our horses for working in the bush, they were at the big stock-camp. (S078)

Finally, the appositional construction [2or3sgPro or 'personal name' Nominal] is used predominantly with kin terms, although it is also used where the possessed is perceived to be owned by the possessor, which is a distinctive relationship in Aboriginal society. Sentences (175) and (176) show the use of this construction with kin terms.

(175)

wan	dei	main	asben	gam–bek	from	stokgemp	en
one	day	POSS	husband	come–DIR	SRC	stock.camp	CONJ

ask–im,	wotfo	**yu**	**anggul**	gon
ask–TM	why	**2sg**	**uncle**	go.quickly/directly

One day my husband came back from the stockcamp and asked, "Why has your uncle gone (so quickly)?" (C064)

(176)

ai	bin	faint–im	jim wesli	main	baba	en
1sg	PST	find–TM	[personal name]	POSS	sibling	CONJ

yang	jeklow	en	det	tethenboi,	det	tethenboi
young	[personal name]	CONJ	DET	[personal name]	DET	[personal name]

jeya	im	en	det	**filik**	**braja**	jinja
there	3sg	CONJ	DET	**[personal name]**	**brother**	[personal name]

I found Jim Wesley, my brother, and young Jack Low and that Tithenboy, that Tithenboy whose there (Ngukurr), and (that) Felik's brother, Ginger. (A126)

Examples of the appositional construction in use with 'owned' possession and body parts are provided in Table 38 above (see also Sandefur 1979:89).

It is noteworthy that both the appositional construction and the possessive pronoun follow the construction type: [possessor possessed], whereas the possession/purpose preposition construction uses [possessed preposition possessor], effectively inverting the order of the possessor to the possessed.

6.3.4 Availability Constraints

E Feature 23 – prenominal possessive preposition used with following possessor nominal, and possibly pronoun – is found in Kriol. This would suggest that there were no constraints on transfer of this feature at an earlier stage of pidgin development. As previously described in §5.3, there is a perceptually salient form in English on which the possession/purpose preposition is based, namely 'belong', which is used in congruent constructions. Consider the following sentences in this way.

That ball belongs to me.
That dog belongs to the boy.

As this shows the English construction, while congruent, is different from that used in the substrate languages and Kriol in that the possessor cannot occur as a direct object, as in the following sentences.

**That ball belongs me.*
**That dog belong boy.*

This lends further support to the claim that the Kriol construction is in fact based on the transferred substrate feature, rather than a corresponding feature in English. In other words, this appears to be a case of negative transfer.

E Feature 24 – Whole Part relations indicated by apposition – is at this stage inconclusive. While Kriol employs apposition constructions for human body parts that are co-referential with the possessor, it is also used with possessed 'owned' objects. Further research is required into the semantic classification of 'ownership' and 'possession' in the substrate languages and Kriol. More examples of the Whole Part relationship are also required in order to provide more thorough understanding of its range of constructions and use. At this stage no claim of transfer can be made in regard to this construction

NE Feature 6 – postnominal 'pronoun possessive' marker – is correct as there is no such feature in Kriol. While it may be that this feature did not previously transfer, all that can be surmised here is that it was lost during levelling due to its low frequency.

6.4 Number

6.4.1 In the substrate

This section will examine the complex marking of plurality and/or collectivity by the substrate languages. While there are quantifiers and numerals in all these languages, they are not included here as this section is concerned with number as a grammatical category and how this is marked on the nominal rather than more direct nominal modification using numerals and quantifiers.

The shared core strategies of marking number in the substrate languages are: pronominal prefixes on the verb (see §3.3), noun class marking (§4.1), nominal affixation and reduplication of the nominal. They are listed in Table 39, whereby a tick indicates that the strategy is used in that language. The table shows, for example, that the pronominal prefix strategy for marking number is shared by all the substrate languages. The noun class marking strategy of marking number on higher animates, is shared by three of the four substrate languages. Ngalakgan noun class markers do not include a number category, therefore relying on nominal affixation and pronominal prefixes as the core number marking features. Reduplication is another shared number marking feature, although it is not a core feature as such. While prevalent in Ngalakgan, its use is restricted in that language.

Table 39: Processes of number marking by substrate language

	Nunggubuyu	Ngalakgan	Marra	Alawa
Pronominal prefixes on verb	✓	✓	✓	✓
Noun class marking	✓		✓	✓
Nominal affixation	✓	✓		
Reduplication	✓	(✓)	✓	✓

Before presenting examples of the number marking strategies it is necessary to show that the choice of strategy depends on the type of nominal being marked for number. Specifically, there is a distinction as to whether the nominal is human, inanimate or higher animate (animals such as dogs and horses). In all the substrate languages number of human referents is obligatorily marked by the use of pronominal prefixes on the verb.

Other methods of number marking can also occur in conjunction with pronominal prefixes. In Nunggubuyu and the Marran languages, noun class markers are optional to indicate number on human nouns. It is similarly optional in Ngalakgan to mark number on human nouns with nominal affixation. For inanimate nominals, number is generally unmarked, but where number is marked, reduplication of the nominal is the method used in all the substrate languages (Heath 1984:195), although infrequently in Ngalakgan (Merlan 1983:90). For higher animates, such as dogs or kangaroos, number marking is optionally marked by noun class markers and pronominal prefixes.

Pronominal prefixes on the verb, as described in §3.3, provide the arguments of verbs, or cross–reference to them, thereby also providing the number categories of singular, dual and plural of the human argument in question. An example is provided in (177).

(177) bigurr–yih **yirrirnbi**–nan–jih
man–ERG **3pl/1pl.ex**–see:EVIT–FUT.NEG
(The) men can't look at us. (Ngalakgan, Merlan 1983:89)

Pronominal prefixes on the verb generally do not indicate number for inanimate and higher animate nominals as the examples (178) and (179) show respectively.

(178) **wu–gu:–gandar** **wu–lu:–lami:** **wu–ju:–jalngarn**
NC–rdp–paperbark.trees **NC–rdp–rivers** **NC–rdp–creeks**

nganggu–ra–ra:–na: **nganggu**–ngurrbu–ngurrbulwa–na:
1sg/3sg–rdp–shout–FUT **1sg/3sg**–rdp–sing.loudly–FUT

I will shout and I will sing out loudly at the paperbark trees, the rivers and the creeks.
(Nunggubuyu, Heath 1980b:57)

(179) **yarraman, bulugi** gohje **gu**–jangan
horse bullock there **3sg**–stand:PRS
Horses and cattle are standing there. (Ngalakgan, Merlan 1983: 90)

Higher animate nominals can optionally be marked for number, as the following example shows. In this case number is marked in agreement with the pronominal prefix on the verb, as well as noun class marking on the nominal itself.

(180) yil–lilmi yang–**jinbirr**–ngadan **yil–girribu**
NC:PL-man hit–**3pl/3pl**–DO:PST **NC:PL–kangaroo**
The men killed the kangaroos. (Alawa, Sharpe 1972:64)

It is optional to use noun class prefixes to indicate number on human and higher animate nominals in Nunggubuyu, Marra and Alawa (Heath 1981a:75-76; Sharpe 1972:64). Ngalakgan is the only substrate language that does not include a distinction for number in its noun class markers (Merlan 1983:37). Sentence (181) provides an example of a human noun marked by a plural noun class marker.

(181) wuna:–garangga: **warra–garnyirimba** **warra–wuruj**
3pl/3sg–look.for:TMA **NC:PL–crowd** **NC:PL–human**
(All) the people were looking/watching for him. (Nunggubuyu, Heath 1980b:22)

Merlan (1983:90) provides example (182), which can be taken as an alternative to (180) above, which shows how noun class marking on higher animate nominals is optional.

(182) yaraman, buligi gohje gu-Ø-jangan
horse cattle there 3-3sg-stand:PRES
Horses and cattle are standing there. (Ngalakgan, Merlan 1983:90)

Inanimate nominals are generally not marked with this number marking method, as evidenced in sentence (178) above, which provides an example of inanimate nominals taking singular noun class marking, because their plurality is indicated by reduplication.

Marking number through the use of nominal affixes, apart from noun class markers, appears to be restricted to the two Gunwinyguan languages. In terms of Nunggubuyu, Heath (1984:160) noted that as noun class markers are frequently omitted, the nominal affixation is a more reliable way of marking number. The same appears to be the case for Ngalakgan. Although this must be qualified by saying that in all the substrate languages the verb agreement, in other words the use of pronominal prefixes, is the most reliable number marking method. Merlan (1983:53) also notes: 'Number is not highly developed as a category of the noun phrase. Almost all explicit expression of non–singular number within the NP [noun phrase] is by suffixation....' Furthermore, such non–singular marking can indicate a sense of 'collectivity' of the nominal, rather than plurality as such. Each language employs numerous affixes of this nature but Table 40 presents the core features and example sentences follow.

Table 40: Gunwinyguan number marking nominal affixes

	Form	Function
Ngalakgan	*–gapul*	Collectivity of individuals or countable members ('all, whole lot')
	garra–	Collectivity or united multiplicity ('all')
	garra– + –gapul	Multiple collectivity ('all of several units')
	–ppulu	Plural on kin terms
Nunggubuyu	*mij–*	Plural marker on kin terms and other human nouns
	–wang~–gang	Group marker, 'X and his bunch', on kin terms and personal names

Examples of the first three listed nominal affixes in Ngalakgan that are used to mark number follow in sentences (183) to (185).

(183) wurrhwurrungu–**gapul** burrurnbu–mehme
old.people–**PL/COLL** 3pl/3pl–get:PP
They picked up (all) the old people. (Ngalakgan, Merlan 1983:54)

(184) **garra**–bolohbolo yirr–nguna
COLL–woman 1ex/3sg–eat:TMA
All we women will eat together. (Ngalakgan, Merlan 1983:55)

(185) ju–gunhbirri bolo–**gapul**–**garra** murnunyju burru–wakena
NC–that old person–**PL**–**COLL** tomorrow 3pl–return:FUT
All those (groups of) old ladies will come back tomorrow. (Ngalakgan, Merlan 1983:55)

An example phrase of the *mij–* plural marker is provided in (186), followed by an example of the *–wang~–gang* suffix in (187).

(186) **mij**–yiwanggu
PL–old.man
old men (Nunggubuyu, Heath 1984:197)

(187) na–yiwanggu–nyung–**gang**
NC–old.man–REL–**GRP**
'the old (respected) man and his bunch/a group of old (respected) men' (Nunggubuyu, Heath 1984:198)

As already mentioned, reduplication, as a number marking method, is used extensively in all the substrate languages, with the exception of Ngalakgan. In that language it '...is little developed except in dyadic kin formations' (Merlan 1983:53). In all the other three substrate languages, reduplication is the favoured method to mark plurality, or collectivity, on inanimate nominals, although it is also possible on animate nominals. In

Nunggubuyu, for example, either complete or partial reduplication is used on inanimate nominals, for example *bardirrinya* 'ghost' becomes *ba-bardirrinya* 'ghosts' (Heath 1984:193-194). An example of reduplication being used to indicate collectivity, is given for *wurrugu* 'billabong', which becomes *wurru-wurrugu* 'a group of billabongs' (Heath 1984:194). Similarly, Heath (1981a:77) provides two examples of reduplication being used to express collectivity in Marra with *ngarrgu-ngarrgu* 'group of billabongs' and *lurlga-lurlga* 'group of islands'. An example of reduplication being used to mark plurality of animate nominals is provided in Alawa, with *yajaja* 'child' becoming *yajayajaja* 'children'.

6.4.2 Reinforcement Principle and predictions

The preceding section shows that the Roper River substrate languages display a range of number marking strategies. There are shared core features, however, and from this information predictions based on the reinforcement principle of frequency can be made. It was found, for example, that in all the substrate languages the strategy used to mark number differs depending on whether the nominal refers to a human, inanimate or higher animate. This feature can therefore form an expected feature prediction. It was also shown that it is obligatory to use pronominal prefixing on the verb to indicate the number of human nominals. The findings of §3.3, however, show that Kriol does not employ pronominal prefixes as agreement markers on the verb. No prediction involving this feature is therefore warranted. Another core number marking method is the use of noun class markers, which can be used optionally on human and higher animate nouns. It was shown in §4.2 that Kriol does not employ noun class markers but that it does rely instead on a set of determiners with similar characteristics, which includes categories for number. The expected feature prediction based on this feature may therefore reasonably replace 'noun class markers' with 'determiners'. Reduplication is another shared number marking method in the substrate languages, particularly on inanimate nouns, which therefore forms another expected feature prediction. Finally, there is evidence of nominal affixation as a number marking method in only two of the substrate languages, which can

indicate a 'collective'. This can therefore form a not expected feature prediction. These predictions are presented below.

Predictions based on number marking strategies

E FEATURE 25:	A distinction between human, inanimate and higher animate nominals in terms of the number marking strategy used
E FEATURE 26:	Determiners optionally used to mark number on human and higher animate nominals
E FEATURE 27:	Nominal reduplication to indicate plural, particularly on inanimate nominals
NE FEATURE 7:	Prenominal and postnominal number markers, which may indicate a 'collective' sense.

These predictions suggest that if the transfer was previously able to occur that the expected features would then have been retained during levelling, due to their high frequency, and eventually found in Kriol. Alternatively, the low frequency feature is not expected to have been retained during levelling and therefore we would not expect to find evidence of the feature in Kriol.

6.4.3 In Kriol

There are various methods to mark plurality and collectivity within Kriol, which differs depending on whether the nominal is human, inanimate or higher animate. First of all, inanimate nominals are generally unmarked for number, as in (188) below. Secondly, higher animate nominals can be distinguished for number by using the determiners, which are more fully described in §4.1, as (189) and (190) show, although (191) further indicates this is optional.

(188)	wi	bin	oldei	blent–im–bat	gaden	en	dai–yim–ap	**damada**
	1pl.ex	PST	CONT	plant–TM–PROG	garden	CONJ	tie–TM–DIR	**tomato**

We were always planting the garden and tying up tomatoes. (C158)

(189)	en	ai	bin	ask–im,	weya	**det**	**buligi–na**
	TPC	1sg	PST	ask–TM	where	**DET**	**bullock/cattle–EM**

I asked, "Where is the/that bullock now?" (C203)

(190) wan munanga bin jeya brabli jemat–bala
one non.Aboriginal.person PST there QUAL intelligent–NOM

meik–im sidan **detlot** **hos** meik–im lei–dan sait–wei
make –TM sit **DET:PL** **horse** make–TM lie–DIR side–DIR

One munanga was there, (he was) very a very intelligent person, he made the horses lie down side ways. (A087)

(191) ei dubala yangboi, yundubala laiki deik–im–bek **hos**
EXC two young.boy 2du like take-TM-DIR **horse**
"Hey two young fellas (there), (would) you two like to take take back the horses?" (S286)

The determiners are used more frequently on human nominals to indicate number, as in (192).

(192) ai bin stop merrit–ap garra **detlot** **lil**
1sg PST FCT married–DIR I/A **DET:PL** **little**

munanga–na blanga **det** **ol–detbogedi,** dotda
non.Aboriginal.person–EM P/P **DET** **RSP–[personal.name]** daughter

en san
CONJ son

*I stayed with (*lit. *married up with) those little munangas (whitefellas), (who were) daughters and sons of that Mr. Ted Fogarty.* (A055)

Another method of number marking in Kriol is with the prenominal number marker *olda* or *ola* and postnominal marker *mop.* The former is best glossed as 'all' and can occur on any noun type. Example (193) shows its use on a human noun and (194) its use on a higher animate.

(193) **olda** **ol–bibul** bin oldei len–im melabat
PL **RSP–people** PST CONT teach–TM 1pl.ex
All the old people were always teaching us. (D015)

(194) wi bin gat–im–at **olda** **wina** bik wan bikwan
1pl.in PST divide/separate–TM–DIR **PL** **weaner** big ADJL rdp
We divided/separated all the weaners (calves), which were getting bigger. (S234)

The reduced form, *ol,* is also used with determiners, in which case it is used to indicate the 'complete/the whole lot', as shown in (195), where it is used in conjunction with an inanimate nominal.

(195) wen ai bin finish **ol** **det** **job–na** ai bin
TEMPORAL 1sg PST finish **PL** **DET** **job–EM** 1sg PST

stat gu–wei–na
INC go–DIR–EM

When I finished the (whole) job I was able to go away then. (A075)

The postnominal number marker, *mop,* is used to indicate a group of the noun in question, where the feature of the noun unites them as a group. Hence there are examples such as *ginu mop* 'group of people in a/the canoe *(ginu)*', *abija mop* 'group of grandparents/mother's father *(abija)*', *dedul mop* 'group of people with turtle *(dedul)* dreaming' and *neiyomi mop* 'a group of Naomi's *(neiyomi)* relatives'. A further example within a sentence is provided below.

(196) det **hami** **mop** bin gam–in–na
DET **army** **GRP** PST come–DIR–EM
The army (as a group of army men) came in (to this country) then. (A082)

Both the prenominal and the postnominal number markers can be used in the one noun phrase, which expresses 'the complete/whole group' as in (197)

(197) **ol** **mai** **greni** **mop** en main mami hanggul
PL **POSS** **grandmother/MM** **GRP** CONJ POSS mother uncle

bin hiya
PST DEM

All my grandmothers (mother's mothers) (as a group), and my uncle on my mother's side were here. (A053)

Reduplication is a process most prevalent within the verb complex, as described in §5.2. It was also described above, in §6.2.3, as a means of indicating increased intensity on adjectives. There were also isolated instances in my data, where reduplication is used in relation to nouns although, as in the following example always with inanimate nominals.

(198) ai bin stat gu–wei–na det jinik–awei–jinikawei
1sg PST ASP go–DIR–EM DET sneak–DIR–rdp

gu werk **naja** **bleis** **najableis**
FCT work **INDPR** **place** **rdp**

I started moving around, sneaking away all the time and going to work at different places (and sneaking away from one place to the next). (A075)

Where reduplication is used, however, it is usually only on inanimate nouns such as this.

In terms of the expected feature predictions, it has been found that there is a distinction between human, inanimate and higher animate nominals in terms of the number marking strategy used in Kriol. Inanimate nominals are most likely to be unmarked for number. Where reduplication is used as the number marking strategy, however, it is most likely to be applied to inanimate nominals. Higher animate nominals can optionally be marked for number through the use of determiners, as can human nominals. E Features 25, 26 and 27 have, therefore, all been found in Kriol. It is further expected that these features previously transferred to the preceding pidgin, before being retained during levelling due to their high frequency. While NE Feature 7 – prenominal and postnominal number markers, which may indicate a 'collective' sense – was not expected to be found in Kriol there is evidence of such a feature in Kriol. The availability constraints may provide explanations for these findings.

6.4.4 Availability Constraints

E Feature 25 – A distinction between human, inanimate and higher animate nominals in terms of the number marking strategy used – is found in Kriol. It is expected that there were no constraints on transfer to the preceding pidgin and due to its high frequency was retained during levelling.

E Feature 26 – determiners used to mark number on human and higher animate nominals – is also found correct in Kriol. The discussion in §4.1.4 of the transfer of determiners, showed that there were no availability constraints on transfer in relation to determiners, because there are perceptually salient forms in English, for example 'that' and 'that lot', which occur in congruent constructions. With no constraints in place this feature may then have transferred to the preceding pidgin and due to its high frequency among the substrate languages, was retained during levelling.

E Feature 27 – nominal reduplication to indicate plural, particularly on inanimate nominals – is found in Kriol. As previously noted in §3.1.4, because reduplication is a process, the availability constraints do not as such apply, although it does appear that substrate transfer of this feature has taken place.

NE Feature 7 – prenominal and postnominal number markers, which may indicate a 'collective' sense – is not correct as there are such features in Kriol. As shown in the previous section, there is the prenominal number marker, *olda* or *ol,* and the postnominal group marker *mop*, which is used to express a sense of the collective. There is a surprising similarity between this Kriol feature and that of the two most common number marking affixes found in Ngalakgan, namely *garra–* and *–gapul*, and the Nunggubuyu number marker, *–wang*. It is possible that with further research similar features may be found in the Marran languages. It must be expected that this feature transferred to the preceding pidgin and, furthermore, was not constrained from transfer.

In terms of somewhere to transfer to, the prenominal number marker *olda* would appear to be based on the English, 'all the' or 'all'. There are also congruent constructions in English where these forms are used. Consider the following in this way.

You must let all the horses out.
All the dogs are barking.
All dogs are friendly.

There is apparently a perceptually salient feature in English that occurs in congruent structures.

The postnominal group marker *mop* is based on the English word 'mob', which also occurs in congruent constructions in Australian English, as in the following.

Where are you mob going?
We'll get Jimmy's mob to do the fencing.
We've got to move that mob of cattle before sundown.

Furthermore, the Macquarie Dictionary (1981:1101) describes 'mob' in Australian English as: '1.a. A large number esp of people ...b. a group of people ... 2a a collection of animals' etc. Yet 'mob' does not seem to be used in other dialects of English in such a manner. It may well be that the Kriol feature in turn influenced the use of the Australian English word on which it was based.

Even though NE Feature 7 was not high in frequency among the Roper River substrate languages it still shows evidence of being the result of substrate transfer from the Gunwinyguan languages, which may then have been retained during levelling. Further research is, however, required to determine why this feature transferred.

6.5 Discussion

There are numerous findings of substrate transfer in this chapter, which are summarised in Table 41. Within the demonstrative system, Kriol shows evidence of substrate transfer of the source construction used with demonstrative adverbs in narratives, as well as the centripetal/non–centripetal distinction in demonstrative pronouns. The adjectival system of Kriol is complicated and requires further descriptive research. The findings of this chapter support Koch's (2000) claim that the *ADJpela N* construction is a result of transfer from New South Wales substrate languages. It is expected that the *bala* feature in Kriol is a result of the diffusion of that feature from the NSW/QLD Pidgin into NT Pidgin and the fact that most forms that incorporate *bala* are frozen form nouns is evidence of that. Other adjectival features, such as the adverbial marker and reduplication being used to indicate intensity of the adjectival characteristic, may, however, have been transferred from the Roper River substrate languages. Similarly, possession marking strategies require further investigation. Both the use of the possession/purpose preposition with following nominals and pronouns, and the apposition of Whole Part relationships appear to be found in Kriol as suspected, although whether they display substrate transfer is inconclusive. Finally, in terms of number marking strategies, it is significant that Kriol distinguishes between human, inanimate

and higher animate nominals as to the strategy used to mark number, which appears to be another case of substrate transfer. It is similarly significant that Kriol uses determiners to optionally provide number marking on humans and higher animates and that inanimates are most likely to take reduplication, which are both expected to be due to substrate transfer. While the pre and postnominal number markers were not expected, they have been found in Kriol, which appears to be due to substrate transfer. Further research is required regarding this feature transfer.

Of the fifteen predictions made in this chapter, only three were proven incorrect, while eleven were proven correct. These figures suggest that the reinforcement principle of frequency allows for a relatively accurate assessment of what can be expected to have been retained during levelling. Furthermore, the availability constraints were able to accurately account for the majority of the findings. It is noteworthy that of the three incorrect predictions, two involved not expected features, which both require further research. It may be that the available information on the substrate languages, on which these predictions are made, is incomplete for all the languages. It may not be the case that only two languages, for example, employ the said feature, but rather that there is only evidence of the feature in two languages. There may not be adequate descriptive material available on the feature in question in the remaining two languages.

Table 41: Summary of Chapter 6 findings

Predictions	**Findings in Kriol**
E Feature 16: [SOURCE DEM.ADV] that may be used as a temporal connective in narratives	Prediction correct. Kriol employs the adverbial constructions, *brom jeya/brom iya* as a temporal connective in narratives. No constraints on transfer.
E Feature 17: The construction: [GOAL/LOC DEM.ADV]	Prediction incorrect. No such construction in Kriol. Constraints apply.
E Feature 18: Centripetal/non-centripetal marker that follows the demonstrative pronouns	Prediction correct. Centripetal demonstrative adverb, *dijei* and non-centripetal *darrei* in Kriol. No constraints on transfer.

E Feature 19: Adjectives acting as arguments, nominal modifiers and stative verbs	Prediction correct. Adjectives can act as arguments and nominal modifiers in Kriol.
E Feature 20: Post adjectival marker [ADJ NOM → N/ADJ] used as arguments or stative verbs denoting colour or inherent characteristics	Prediction correct. The *bala* marker is expected to have been a product of substrate transfer to NSW/QLD Pidgin. It diffused into NT Pidgin and was retained during levelling.
E Feature 21: Postadjectival adverbial marker [ADJ ADVL → ADV]	Prediction correct Kriol employs the adverbial marker *wei* in a similar manner. No constraints on transfer.
E Feature 22: Reduplication used on adjectives to denote qualification and intensity.	Prediction correct. Kriol does use reduplication on adjectives to denote qualification or intensity.
NE FEATURE 5: Pre or postadjectival markers to denote degrees of intensity.	Prediction incorrect. Kriol does employ three primary preadjectival modifiers to indicate degrees of intensity on adjectives. May be due to positive transfer or borrowing from English.

E Feature 23: Prenominal possessive preposition used with following possessor nominal, and possibly pronoun.	Prediction correct. Kriol uses the possession/purpose preposition with following nominals and pronouns. No constraints.
E Feature 24: Whole Part relations indicated by apposition	Inconclusive. Further data is required.
NE Feature 6: Postnominal 'pronoun possessive' marker	Prediction correct. No such feature is found in Kriol. Constraints apply

E Feature 25: A distinction between human, inanimate and higher animate nominals in terms of the number marking strategy used	Prediction correct Kriol distinguishes between human, inanimate and higher animate nominals in terms of number marking strategies.
E Feature 26: Determiners optionally used to mark number on human and higher animate nominals	Prediction correct. Determiners are used optionally to mark number on humans and higher animates in Kriol. No constraints apply.
E Feature 27: Nominal reduplication to indicate plural, particularly on inanimate nominals	Prediction correct. Kriol employs reduplication, particularly on inanimate nominals.
NE Feature 7: Prenominal and postnominal number markers, which may indicate a 'collective' sense.	Prediction incorrect. The prenominal number marker *olda* and the postnominal group marker *mop* found in Kriol.