

Language contact interaction and possessive variation

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This paper focuses on contact interaction in the development of possessive constructions. In contrast to 'copying' approaches to structural diffusion, contact interaction approaches recognise that internal and external models interact, often to produce innovation and variation. Some examples of this in possessive constructions from early English and pidgins and creoles are explored, including the question of 'for' and its equivalents becoming postposed including in Australian Creoles. Two theories of how adoption of structures from external sources can be staged and modified, that of Carol Myers-Scotton (the 4-M Model) and Ross's Metatypy model are compared with examples from possessives, as well as Aikhenvald's treatment of possessive construction diffusion in the Amazon. There appears to be common ground between these approaches, and the contact interaction approach in general.

1. Introduction

The paper takes a **Contact Interaction** approach to the phenomena of possessive constructions, focussing on emergent innovation in the context of language contact. In this phrase 'interaction' is intended to convey, firstly, the centrality of social and conversational interaction between bilingual people in most instances of contact-induced change. Secondly it is intended to open up the possibility that the process of contact-induced change is not just a matter of one language 'copying' structures from another, but the two languages interacting to produce results which can be different from either of the two contributing languages. It is this second sense of 'language interaction' which will be the centre of interest in this paper.

The paper sets out some possessive construction types, drawing on the literature on pidgins and creoles, but also dealing with the history of English to some extent, and languages where radical restructuring due to contact has been described. In some cases the contact language may have played a role, but only as one element in the input to the interaction which produces innovation.

Variation is commonly found in possessive constructions, sometimes partly influenced by adoption of forms and structures from external models, and this paper mentions many examples of this. This may be related to stages of gradual penetration of structural influence from another language, and two theories of such staged penetration are highlighted—the 'metatypy' proposal of Ross (1996, 2001) and the 4M framework of Myers-Scotton (2003) especially the concept of 'composite' matrix language. Staged interaction does not necessarily end with the complete reworking of the grammar and loss of variation, as variants acquire discrete functions through their history and survive, often in an adapted form.

Neither of the approaches mentioned in the last paragraph have dealt significantly with variation despite its salience in many contact situations. Pidgin and Creole studies however have been notable in making study of variation central and this is one reason why such data is prominent here. This paper begins to probe the connection between contact interaction and variation. A key issue is how structures which are products of language interaction—and not solely of 'copying' - emerge as sets of variants, whether these variants are subsequently levelled, and if so, how.

The following section briefly introduces some models of contact-induced change in language, and Section 3 presents a typological overview of possessive constructions. In Section 4, interaction and variation in contact situations are examined in language data, with particular attention to cases where the end result is not a direct continuation of the structure of any of the languages involved, and to the cases of pidgins and creoles. Then Section 5 looks at the problems raised by cases of the diffusion of features and the interpenetration of grammars, assessing such cases against the two theoretical models mentioned above. The paper concludes with some observations as to lines of further research which seem especially promising.

2. Models of contact and change

2.1 Copying models

A relatively simple type of model of language contact is that which attributes change to copying of elements or structures from one language to another. Johanson has elaborated a framework based on this notion (1999) and the concept of 'replication' used in Heine and Kuteva (2005) is quite similar. Many other writers do not adopt these terms or models but nevertheless use this copying concept implicitly in analysing how one language has influenced another.

'Copying' is applicable in some cases but fails to capture the range of phenomena involved in contact. Many writers point to changes in items or structures 'copied' or 'borrowed' as 'adaptations' of the new element or pattern to the new environment of the 'host' language. It is not always obvious, however, that the innovations are truly adapted from structures copied in.

2.2 Code-switching and constraints

It is desirable to identify the mechanism by which contact-induced change comes about. Some theories of constraints on contact borrowing and influence can provide a foundation, for instance Myers-Scotton and colleagues provide such a theory where contact change results from code-switching. McConvell and Meakins (2005) show that Gurindji Kiol (GK) is a product of children having as input pervasive code-switching in the previous generation. The patterns of GK syntax can by and large be accounted for in terms of Myer-Scotton's theories.

2.3 Compromise strategies

The emergence of new forms and patterns which do not come directly from either of the contributing contact languages can be a problem for some theories. For contact models in which elements are simply copied between languages, such innovations fall outside the predictable, and may be assigned to a different type of change (obsolescence and/or 'normal' internal change). However Myers-Scotton's theories have at least the germ of how to approach such phenomena in the notion of 'compromise strategy.' These strategies arise from situations where there is a clash between grammatical constraints arising from the two contributing languages.

'Compromise strategies' alongside 'convergence' discussed in the next section are two aspects of what Myers-Scotton and colleagues, in their 4-M model, called 'composite code-switching' as opposed to 'classic codeswitching' (e.g. Myers-Scotton 2002). In the classic form, one of the contributing languages strictly provides the Matrix Language, which sets the morpho-syntactic frame. The composite form, in which both languages interact to yield the matrix language is not only relevant to code-switching, but also other types of contact induced change.

2.4 Convergence

Recent work on these issues in the 4-M model distinguishes between 'compromise strategies' and 'convergence'. The latter is described as 'a process that promotes a splitting of abstract structure in one variety and its combining with such abstract lexical structure from the other variety, often resulting in a restructuring of grammatical relations and even surface-level grammatical morphemes from the stronger group in the equation' (Myers-Scotton 2002:164).

While 'compromise strategies' appear in contexts with an Embedded Language lexical head, 'convergence' can result in structures being borrowed from a contact language without change in any of the lexical items to those of the contact language.

3. Possessives

3.1 Variation in possessive constructions

Possessive constructions have a wide range of variation both within single languages and across closely-related languages and dialects, and in language contact situations. Possessive constructions seem to be relatively easily borrowed but also new possessive constructions can come into play. Some of the alternative possessive constructions that persist in single languages may in fact have their origin in contact phenomena.

Two aspects of possessive constructions are of particular concern to us;

1. the positional syntax of the possessive in the noun phrase;
2. the mapping between the forms of marking and various functions, including various types of possession (e.g. alienable vs. inalienable) and other relations which are similar to possession and often share the same forms.

These two points are considered in Sections 4-5, but first some clarification of the terminology and sub-classification of possessives is in order, in Section 3.2.

3.2 Terminology and sub-classification of possession

The following terms coined by Heine and Kuteva (2002:24, cf. Heine 1997:139) are useful:

A-Possessive - 'of' attributive possession

B-Possessive - 'belong' predicative possession

H-Possessive - 'have' possessive

Within the A-possessives, in the absence of a generally accepted classification scheme, here is a heuristic list of grammatical types which I shall use throughout this article. The suggested coding is in the second column, compared to Heine and Kuteva's coding (2001) in the third column.

Table 1: Syntax of NP possessives

Type	Sub-Type	H K Code	Item1	Item2	Item3
Juxtaposed	RE	A	POSSESSOR	POSSESSED	
	ER	B	POSSESSED	POSSESSOR	
Linked (with possessive linking morpheme)	EMR	C	POSSESSED	POSSPREP(-)	POSSESSOR
	MRE	G	POSSPREP (-)	POSSESSOR	POSSESSED
	RME	E	POSSESSOR	(-)POSSPOST	POSSESSED
	ERM		POSSESSED	POSSESSOR	(-)POSSPOST
Pronominal	PE		POSSPRON	POSSESSED	
	EP		POSSESSED	POSSPRON	
Pronominal link	RPE	D	POSSESSOR	POSSPRON	POSSESSED
	PER	F	POSSPRON	POSSESSED	POSSESSOR
	EPR		POSSESSED	POSSPRON	POSSESSOR

An attempt has been made to have mnemonic codes for each type:

E - Possessee; R- Possessor

M - Marker, invariant, either preposition before the Possessor (e.g. *of* in English), or postposition or suffix following it (e.g. *'s* in English)

P - Possessive Pronoun (*his* etc), varying in agreement with Possessor

This represents a slight modification of Heine and Kuteva (2001:4) who use the following set of abbreviations in their typology of possessives in Creoles:

PE = E above (Possessee); PR=R above (Possessor);

M is as above (Marker) and Ma = approximately P, but is actually defined as a marker which agrees in number with the Possessor—in practice a pronominal element. As we shall see such pronominal elements can become invariant and thus become in effect M's.

Heine and Kuteva's coding system (2001:4) listed in the third column of Table 1 will not be used generally in this paper, but it is noted for reference. It does not include possessives with possessive pronouns only (PE and EP). Nor are the sequences ERM and EPR coded as they are not believed to be attested in creoles—they are found in other languages as we shall see however. Nichols (1988:563) has a seven-way coding system for the typology of possessive systems but this classifies overall possessive marking in a language, not individual constructions.

Of course word order in the NP's is not always syntactically determined, e.g. in most Australian Aboriginal languages. So the pairs above (PE & EP etc) form classes, but these are not labelled.

E and R are roughly equivalent to what Harris and Campbell (1995:230) abbreviate as N (head Noun) and G (Genitive). The E/R abbreviations are preferred as N is commonly used in the more general sense of Noun, and genitive is sometimes taken to mean a (noun with a) case suffix, which is not necessarily the case with R.

The relative position of the elements is the main criterion here; whether the linking elements are independent words, clitics or affixes is not taken into account: this is the significance of the bracketed hyphen. This makes the coding system unsatisfactory in some ways and it may be preferable to replace the undifferentiated M (marker) borrowed from Heine and Kuteva (2001), with S (<suffix or English *-s*) and O (preposition <English *'of*').

4. Change and variation in possessive syntax

4.1 English and other Germanic languages

In Old English the genitive phrase could precede or follow the noun head, but during the Middle English period, as well as the reduction of the variety of genitive case-marking to a single form (*-s*, itself probably under Anglo-Norse influence), the postnominal position also disappeared fairly rapidly. Allen (1998) relates this to the loss of case-marking, particularly on the initial determiner, which would no longer mark the possessor noun phrase's function.

However, another relevant factor in the same period is the rise of the postnominal prepositional *'of* possessive phrase. Here the influence of Norman French with its postnominal *'de* possessive phrase is probably a factor. Originally the preposition *of*, like Latin/Romance *de*, meant *'from*' and was gradually extended to encompass the possessive in middle English. Here is an example where the *'from*' sense is still evident:

- (1) lichoman claennes sceal scinan of clænre heortan
body's cleanness shall shine from clean heart
'bodily purity must shine from a pure heart' (late 10th century)

Some three hundred years later, the 'from' meaning of 'of' had been almost totally supplanted by the possessive sense, as in the example (2). 'fram/from' originally meaning 'by' and 'from' had narrowed to a meaning 'from'.

- (2) *And that felyng of joy in the lufe of Jhesu passes al other merites in erth* (early 14th century)

The main changes are summarised in Table 2 below:

Table 2: Changes in possession in the history of English

Old English	Middle English	Modern English
RME- N-gen N	N-es N	N's N
ERM- N N-gen	[disappears]	
of = from	of = from	[disappears]
	EMR of = POSS	of = POSS

The 's and *of* constructions have of course continued to the present day with functional differences, e.g. the use of the 'of' phrase mainly with heavy NP possessors.

From this example we may learn three lessons:

1. A syntactic change may not be due exclusively to either an internal development or a contact effect but may be due to both in concert, feeding back and reinforcing each other;
2. An 'innovation' is often not totally new but an existing, perhaps minor, construction, which is redeployed for an extended use where this coincides with both an external model and internal functional need;
3. Two forms or constructions which begin as roughly synonymous, including a contact form or structure borrowing, may develop functional distinctiveness and survive for a long period.

Lander (2002, 2005) discusses structural analysis of the two construction types (RME and EMR, e.g. the 's and *of* constructions of English) cross-linguistically and the role of semantic factors such as animacy in favouring one or the other. Further relevant discussion is to be found in Nichols (1988:580-1).

Holmberg and Sandstrom (1996) review the variation in possessive syntax in Scandinavian languages. Icelandic is most conservative in having the order possessed-possessor (ERM with -s genitive on the possessor) but other languages have moved mainly towards possessor-possessed order (RME) and some dialects have also adopted various prepositional constructions (EMR) as alternatives. There is also variation in the type of NP which can be possessor in the different available constructions, which Holmberg and Sandstrom say is amenable to implicational scaling. Similar effects are found in other languages, e.g. in German it is possible to have only proper nouns and a small range of similar NP's in prenominal position.

4.2 Variation in Atlantic creoles

English based Caribbean Creoles generally have one of either of these types or both

- RE - Possessor-Possessed (with no possessive marking)
- EMR - Possessed-POSSPREP-Possessor

In many of the languages these two constructions are both present in the language (Bickerton 1999:58). Some authors indicate that there may be semantic or structural motivation for choosing one or the other, e.g. the prepositional form is

'emphatic' or is used with long possessor NP's, like the 'of' phrases of English. In other languages though, pure variation seems a large part of the story.

Some writers on creoles seem to adopt the view that the RE type comes from the English 's construction (RME) with 's dropped, perhaps a phonologically motivated change. However simple juxtaposition is a common way of expressing possession in languages and could be seen as emerging independently in a situation of creation of a new language, once left-headedness had already been set as a parameter. African substratum influence has also been occasionally suggested, but, in a high proportion of the substratal languages, simple juxtaposition is not found as the prime means of expression of possession.

The inverse of RE juxtaposition, ER, also occurs in some Atlantic Creoles but, it seems, only in those with Romance superstrates with typically EMR possessive structures. Bickerton (1999:58) notes that 'when [English possessive 's] is lost, possession may be expressed by direct NP-to-NP attachment ('Bill book', as in Guyana), by a prepositional phrase ('for Bill book' as in Jamaica) or by both (as in the Surinam Creoles)' He goes on to suggest that conversely structures like 'book Bill' can result from the typical N-G or H-D (Genitive-Noun; Head-Dependent; Harris and Campbell 1995:230) word-order of NPs in superstrate French or Portuguese, even though the linking prepositions (*de* etc) have gone missing. Because of these kinds of effects, Heine and Kuteva stress the importance of inheritance of lexifier language grammar even where there is also considerable innovation in the Creoles (2001:28-30,37).

There seems to be evidence that the process involved in producing the juxtaposition constructions was gradual loss of the possessive marker. In some cases both forms are retained as either free variants or under different conditions, including restriction of the juxtaposition construction to partonymy (Heine and Kuteva 2001:34-5).

It is possible however in some cases that the alternation was present throughout the history of the pidgins/Creoles as basilectal/acrolectal variation. In this alternation in the expression of possession between RE and EMR, the implicational scaling method used by Bailey and by Bickerton might be applied (Bailey 1973; Bickerton 1973; Rickford 2004). The case differs from some of the more often quoted cases, in which one variant is obviously more 'acrolectal' and more similar to the superstrate English form and the other more 'basilectal'. In many of the cases using markers descended from *for* in English or *pour* in French, neither are found in standard forms of the superstrate language, where the prepositional form is 'of' and 'de' respectively (for use of *pour* in Tahitian French, see Love, this volume, No. 1).

In the Atlantic creoles the possessive preposition (M) is generally *fu* or *fi* (from English *for*, presumably), but in the Pacific it is *bilong* (or variants, from English *belong*(ing to)). This is not an absolute rule, however, as in recent variants of Australian creoles, elements related to *for* are replacing *bilong*. This is discussed in the next section.

It has been noted that there is no direct model in any English dialect for the 'house for John/me' as a possessive, and it has been described as a substratum effect from West African languages (Holm 2000:221), some of which have this kind of neutralisation of dative/benefactive and possessive prepositions. Similar usage of reflexes of *pour* in French-based Atlantic creoles is seen as evidence supporting the substratum theory (cf. Lumsden 1994; this is also the case in Seychellois and Tahitian French however).

Substratum, at least as direct copying, is unlikely as an explanation of the new emergence of 'for' possessives in Australia. Rather the use of 'for' as in 'this house is for John' is close semantically to the possessive and seems to extend in that direction rather readily. Dative extended to genitive/possessive use is known from various Germanic dialects (Burridge 1996) and is found in many Australian Aboriginal languages (see Meakins and O'Shannessy this volume, No.2).

Another feature which occurs in Caribbean creoles is the positioning of the 'for' (*fu/fi*) Possessor Phrase before the Possessed:

- POSSPREP-Possessor-Possessed (MRE)

It seems that this construction is in variation with the EMR type in most of the languages where it occurs, except in Jamaican where only RE and MRE are reported by Bailey (1966: 97-98)

Jamaican creole

- (3a) *Rabat müzl* 'Robert's measles'
- (3b) *?*hous fi tiicha* 'teacher's house'
- (3c) *fi tiicha hous*

RE and MRE are also the norm in Belize creole (Escure 1981:34-5):

Belize Creole

- (4a) *mai mada breda* 'my mother's brother'
- (4b) *?*breda fi mai mada*
- (4c) *fi-yu wata naisa a fi-wi wan* 'your water is nicer than ours'

However Escure notes that there can be variation to EMR order where the possessor is a long NP. The examples from Jamaica and Belize suggest that some kind of inalienable /alienable dimension might also be involved in the preference for RE or MRE (MRE having more affinity with alienability perhaps). Holm (2000:221) reports Ndyuka (Guyana) as having the RE and MRE forms but the Huttars' grammar (1994:201-2) gives examples of RE, EMR and MRE:

Ndyuka

- (5a) *mi ede* 'my head' (mi='me', not 'my')
- (5b) *pikin fu wi* 'our children'
- (5c) *fi en piki* 'her children'

This MRE construction is clearly even further from English than the postposed 'for' possessive construction, so superstrate origin is ruled out. Holm suggests that the prepositional possessive type (EMR & MRE) may have originated as an emphatic form. One presumes that the preposed type came later, but more research is needed.

Although it is not mentioned in the creole survey literature, preposing of the POSSPREP phrase (MRE) is also found in some dialects of north Australian Kriol, both with elements descended from 'belong' and 'for'. This is further discussed below.

Another common type of possessive constructions in pidgins/creoles is:

Possessor-Possessive pronoun-Possessed (RPE)

which in English would be exemplified by a sentence like 'teacher his house'. This type of possessive construction made an appearance in late Middle and early Modern English but fairly rarely; it also occurs in non-standard dialects of some other Germanic languages (including Afrikaans), but none of these is a plausible source for it in any pidgin-creole.

In Atlantic Creoles it is found in Negerhollands (based on Dutch) and Papiamentu (based on Portuguese) where RE is ungrammatical (Bruyn 1995:26):

Papiamentu

- (6a) *Pedro su kas*
Peter his house
'Peter's house'

- (6b) **Pedro kas*

In some languages a possessive pronoun has further grammaticalised into a pure possessive marker - outside the Atlantic region, in Korlai Portuguese for instance (in India) *su*, originally 'his' in Portuguese has developed this way; there is also an inverted variant ERP (Clements 1996:140,167)

Korlai Portuguese

- (7a) *Pedru su doy kadz* 'Pedro's two houses'

Possessed–possessor–possessive pronoun ERP

- (7b) *Tidoy kadz Pedru su* 'Both of Pedro's houses'

It is somewhat odd to find this construction in Portuguese based pidgins and creoles in very scattered parts of the world although there is apparently no model for it in Portuguese itself. This suggests that it may have been a feature of an early widespread Portuguese Pidgin variety, a feature whose origin is obscure but most likely an independent innovation, as this type of construction has emerged sporadically also in other languages (Heine and Kuteva 2001:17-18). Heine and Kuteva (2001:16-17) refer to these constructions as being built on a 'Topic schema', and as grammaticalised from constructions with the possessor as topic, i.e. 'Peter, his house' > 'Peter his house' and other potential stages (2001:20-4). In Mauritian and Seychellois Creoles the pattern PER is also found, and Heine and Kuteva (2001:18-19; cf Heine 1997:148) refer to it as an 'anti-topic schema'. The RPE/PER construction is not found in pidgin-creoles in the Pacific region or Australia as far as I know. However there are other kinds of variation in possession not only between but also within Pacific and Australian Creoles. As noted by Heine and Kuteva (2001:24,49) there are several different possessive constructions in each of a number of Creoles, some of which may have entered their respective languages at different times, and even after 'stabilisation', variation continues (e.g. four distinct possessive constructions in Seychellois and five in Louisiana Creole French). Australian creoles are no exception.

4.3 Australian Creoles

Australian pidgins developed from a Pacific English-based pidgin in the nineteenth century, spread out from the east coast, and creolised in a few places in the twentieth century. The earliest known locus of major creolisation of the eastern cattle station pidgin was around the Roper River between 1910 and 1920 and subsequently, mostly in the 1950's, this variety (later named Kriol) with some regional variations, became the first language of many thousands of Aborigines across the central north. Another distinct variety, Torres Strait Pidgin, also creolised on some Torres Straits islands and parts of Cape York Peninsula in the 1930's and has been gaining speakers in the Straits and Cape York Peninsula ever since. It seems likely that two possessive structures were already present in the early Pidgin and passed into the Creoles:

- Juxtaposition of the type RE
- A prepositional type EMR, the preposition being initially *bilong/bilonga* later yielding *blanga/bla*.

Shnukal (1985) notes that there was variation between these two types in the Torres Strait:

- A. Possessor–Possessed (RE) (with no possessive marking) - a examples in (8)-(9).
- B. Possessed–POSSPREP–Possessor (EMR) - b examples in (8)-(9).

- (8a) *da boi nem*
 (8b) *nem blo da boi* 'the boy's name'
 (9a) *em waif*
 (9b) *uman blo em* 'his wife'

B (EMR) is the most common pattern, and A (RE) is found more among young people and in the near western and central islands. One could therefore construct a diagram showing pattern A expanding at the expense of Pattern B:

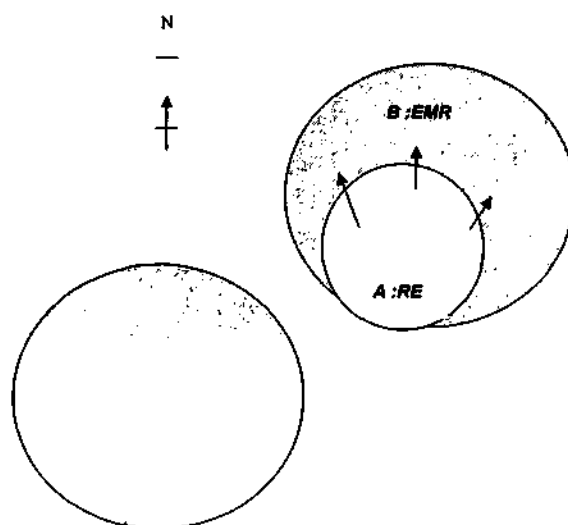


Diagram 1: Torres Strait Creole, possessive variation (inferred from Shnukal)

The overlapping waves diagram may be an abstraction from a smoother continuum like that represented on the left of the diagram, although it is unlikely to be so smooth as that appears. Shnukal does not provide numerical data in the source referred to, but one might idealise the situation for illustrative purposes and say that some pattern like that shown in Table 3 is in play.

Table 3: Possessive variation in Torres Strait Creole (hypothetical idealised data)

Speaker	Says	Or
South	RE	RE 90%/E blo R10%
Central	RE & E blo R	RE 50%/E blo R50%
North	E blo R	RE 10%/E blo R 90%

At one level of granularity one might find that a typical Southern speaker uses only RE forms, and a typical Northern speaker uses only EMR forms, with a Central speaker using both. If however the distribution follows what variation studies elsewhere have found it is more likely that all speakers use both forms, but the frequency varies by geographical region, age and (at another level of granularity) style and register being used. Hypothetical percentages have been inserted in the table to give an idea of what might be found using only the geographical criterion. While Shnukal sees a trend towards more adoption of the RE among the young, it is not valid to extrapolate back before diffusion to a point where this variant did not exist. As with other pidgins and creoles it may have been a less preferred option at an early stage which later expanded. In the western block of Australian Creole varieties known as Kriol, the same two variants are also found. Once again the RE variant is less frequent although it is found in a number of 'Aboriginal English' varieties,

and it is more frequent with pronouns. In Kriol (Sandefur and Harris 1986; Sandefur 1979:89), the main canonical forms of possession for possessor nouns involve a preposition *bla/blanga* (< English 'belong') preceding the possessor noun.

- (10) *buk bla Jon* 'John's book'

Generally this possessor PP follows the possessed noun as in (10), (EMR) but there is dialectal variation in Kriol here. Forms like the following are also found in Kimberleys Kriol in the west (Hudson 1983:71-2)—a preposed possessor PP (MRE) as in (16) and a preposed Possessor with *bla* acting as a postposition (RME) as in (11b).

- (11a) *bla Jon buk*

- (11b) *Jon-bla buk*

An alternative for *bla/blanga* which seems relatively new and is gaining more ground throughout the Kriol area is *fo* or *bo*, from English 'for'. As with the Atlantic Creoles, where such forms are common, this cannot be said to be a direct borrowing from English where 'for' is not used as a possessive preposition in NPs. It is however used in predicate dative/benefactive PPs in English as in 'that book is for John'. The following are some Kimberley Kriol examples of the three possible structures, using either *bla* or *fo*. (Underlined items are from the substrate language Walmajarri).

EMR

- (12) *ai bin faindim det kap bla det wumun* 'I found that woman's cup'

MRE

- (13) *i bin bak bla im hos* 'His horse bucked'

RME

- (14) *Trisa fo dedi bin kam* 'Trisha's daddy came'

- (15) *Det sneik bla ai dei kolam rili dipwan* 'They call the deep ones 'snake's eyes''

- (16) *I bin filim det manga blang jinkari* 'He felt that girl's thigh'

In most of the traditional languages of the region there is a grammatical distinction between inalienable possession (body parts and other partonomy) and alienable possession with in many languages the inalienable type being expressed by juxtaposition versus explicit morphological marking of alienable possessors. While this may have been mirrored in early pidgin usage the distinction is not found in most varieties of Kriol today, as examples (15) and (16) show, where *bla/blang* is used with body-parts. A further variant which is found in Kimberley Kriol is doubling of *fo*—before and after the possessor noun (MRME).

- (17a) *fo M fo greip* 'M's grapes' (Hudson 1983:72)

- (17b) *fo K fo fatha* 'K's father' (Hudson 1983:47)

RME and doubling forms are also attested in Gurindji Kriol (Charola 2002:8, see also Meakins and O'Shannessy, this volume, No.2). This is doubling of an item from one source and is quite distinct from the doubling involving insertion of possessive morphology from each of two contributing languages. This doubling is rather a blend of a similar kind to relative clauses like 'from where we come from' in English, and so should be referred to by a separate term, perhaps 'double blend'. Hudson (1983:7), Munro (2000, 2005) and Charola (2002) claim that the RME forms are due to substrate influence particularly from languages which, like Walmajarri and Gurindji, have a dative case suffix which fulfils the function of a genitive in alienable possession:

- (18) *John-ku mirlimirli* 'John's book'

It does seem that this is a relatively recent development in Kriol, found in the west only, and this is a plausible enough explanation of this change. However as with a number of other substrate and diffusional explanations which will be

reviewed below it is important to put them under the microscope to see if they are truly the only possibilities or whether they represent perhaps part of the story. Since substrate and diffusional influence is not always active it is important to discover the constraints on it and the extent to which it must interact with internal settings and developments to be activated. One point in a critique of what I shall call the 'Dative Substrate Hypothesis' for RME in Kimberleys Kriol is that not all the languages of the Kimberleys have the type of Dative case-marking for possession illustrated in (18). The Non-Pama-Nyungan languages of the Jarragan family for instance have quite a different type of possession marking involving pronominal enclitics (McConvell 2004). The Non-Pama-Nyungan (NPN) speakers had their country invaded earlier than the Walmajarri in the Kimberleys and were generally the first to undergo language shift to Kriol so one might want to trace substratum effects to them in the first instance. However it is possible that the rise of the RME structure of possession did coincide with the later shift of Walmajarri speakers to Kriol. By that stage also quite a number of the NPN speakers had adopted Walmajarri as a first language. Further detailed research on the timing of this change might help to clarify the history.

The point has been made earlier that substratum influences often work in conjunction with some prior patterning in the expanding language. In the case of Kriol, the superstrate, English has the possessive 's which functions in a similar way to the *fo* or *bla* when they have been transformed into postpositions. Normal mesolectal Kriol however does not have the 's morpheme, so a hypothesis of interaction of this kind would require a situation where English was much more part of the language ecology than has generally been assumed. A more significant observation is that the *for* and *bilonga* have occupied positions to the right of the possessor NP in early pidgins and Kriol for a long time, particularly in the case where the possessor is a *wh*-question word in initial position.

Examples include these dating back 150 years to the earliest British settlement in the Northern Territory: (from Keppel 1853, Port Essington):

- (19) what for you take guide in bush?

There are others closer to 90-100 years ago which are recognisably the same language as Northern Territory Pidgin and Kriol (from Searcy 1909, 1912):

- (20) what for you killem me along a head?

These examples are drawn from the short appendices of historical examples in Harris (1986). No examples of this structure other than 'what-for' have been gathered from this period and more research is required. A reader suggested that this form is very old in English, and may be analyseable as a single unit. Nevertheless pidgin users could still infer a WH-PREP structure from it despite its marginality. The pattern was much more general when I was first recording Kriol in the Victoria River District in the 1970's and is unlikely to have been new. The presence of *bilonga* in example (21) shows this is basilectal Kriol rather than acrolectal.

- (21) *u bilonga ngapu?* Whose is it dad? (Gurindji/Kriol codeswitching 1977)

These structures were used in restricted grammatical contexts but would have provided a model on which further expansion of the RME pattern could have developed. This may have been via an expansion of the construction from *wh*-focus elements to focussed elements more generally, and it may be that the construction has played a focussing role in Possessive NP's or perhaps still does. The existence of double blend variants of this construction (MRME) tends to support this view of the development. Further research is required on these matters. While the model of the substrate languages with dative/genitive case-marking may have been a factor, it seems quite likely that at the least this positively interacted with the internal presence from the earliest times and further development of the RME pattern in the Pidgin and Kriol itself. A possible account of these developments in Kriol is presented in Diagram 3 below.

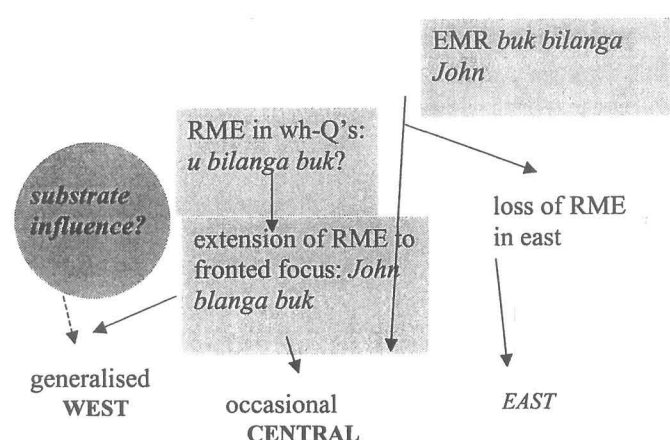


Diagram 3: Possible development of RME in Kriol

5. Contact diffusion of possession

Having cast an eye over a substratist hypothesis in an Australian creole, we now move to a couple of examples where adstrate contact diffusion has been implicated in the moulding of the form of possessive constructions, in Amazonia and the Pacific, then return to theoretical issues, in particular the predictions of the metatypy hypothesis and 4-M model.

5.1 Tariana and Tucanoan

Tariana belongs to the North Arawakan group of languages but has been influenced in many ways by the grammar of East Tucanoan neighbouring languages. The situation in Table 5 represents an earlier stage in interaction of possessive syntax, before some more recent changes touched on below. Possessive prefixes have been retained for inalienable possession (kin and body-parts) from ancestral Arawak, but alienable possession is said to be related to the patterns of East Tucanoan (Aikhenvald 2002:78).

Table 5: Possession marking in Tucanoan and in Arawak languages
(based on Table 4.1, Aikhenvald 2002:78 with Tariana added)

Semantic groups of nouns		Marking		
Kinship terms	Juxtaposition RE	Juxtaposition RE	Possessive prefixes	Possessive prefixes; non-possessed: indefinite i-root and suffix
Body Part terms		Possessor ya + classifier		
Alienably possessed items	Possessor ya + classifier		Juxtaposition RE OR Poss prefix + ya + classifier (when focussed)	Possessive prefixes and possessed suffixes
	Some East Tucanoan	Some East Tucanoan	Tariana	North Arawak & Proto-Arawak

The Tariana and Tucano 'Possessive ya + classifier' constructions are classed as the same (Aikhenvald 2002:85, Table 4.2). However the patterning of alienable possession is in no way a copy of that of East Tucanoan languages. The RE juxtaposition is used but not for inalienable, rather for alienable. There is an alternative structure which looks similar to

that found with alienable possession in Tucanoan, but instead of an independent possessor noun or pronoun a pronominal prefix is used: compare (22) with (23) (Aikhenvald's 4.12 and 4.13):

- (22) **Tariana**
pi-ya-ku (ama-ku)
 2sg-POSS-CL:EXTENDED hammock-CL:EXTENDED
- (23) **Tucano**
mi'i ya-gĩ (pũ-gĩ)
 2sg POSS-CL:LARGE hammock-CL:LARGE

This second kind of possessive construction in Tariana is used where the possessive is in focus—as Aikhenvald (2002:80) describes it “areal influence from East Tucanoan on Tariana has resulted in the emergence of two alternative techniques employed under different, discourse conditioned circumstances”. Thus one might imagine that this development is related to the third lesson drawn from the case of the development of the ‘of’ possessive in English discussed above in 4.1 and repeated here—“two forms or constructions which begin as roughly synonymous, including a contact form or structure borrowing, may develop functional distinctiveness and survive for a long period”. What is equally interesting is that Arawakan word order is much freer than in Tucanoan languages. In most Arawakan languages this includes the ability to switch the position of Possessor and Possessed in Possessive NPs for pragmatic reasons. ER is a variant of RE where R is in focus. However Tariana has adopted the more fixed order RE under influence from East Tucanoan. While Aikhenvald does not directly make this connection, it seems that the new *ya* construction provides the ability to focalise the possessor, taking over this function from the previous Arawakan word order flexibility. This suite of changes has some fascinating parallels to the changes in possessives in Middle English discussed above in Section 4.1. In this case both the alternatives in Tariana, juxtaposition and the *ya* construction, are attributed to areal diffusion. However, Aikhenvald points out that the prefix+*ya*+classifier structure of Tariana is similar to that used in possessive predications in Baniwa, a neighbouring Arawakan language, e.g. in (24).

- (24) **Baniwa**
pi-dza-ku
 2sg-POSS-CL:EXTENDED ‘(this hammock) is yours’

Aikhenvald writes that Baniwa *dza* is cognate to Tariana *ya*, with *dz:y* being a regular correspondence between these two languages. What appears to be claimed here is that the *ya* possessive construction was in fact borrowed either into the common ancestor of Tariana and Baniwa, which form a branch of Arawakan, or independently into both languages (cf. also Aikhenvald 1999:410). The construction diverged in function either at the time of borrowing or later, predicative in Baniwa and attributive in Tariana. This could be a case of extension of a predicative possessive construction to a nominal one, within the same linguogenetic group, as occurs in other cases. This would tend to explain why it has a focal usage in Tariana. The weight of evidence would seem to point to the restriction to predicative function being an innovation in Baniwa.

Aikhenvald also discusses a number of more recent changes in possession in younger people's Tariana which are attributed to Tucano influence (2002:81ff). Some of these involve movement of inalienable kinship and body part nouns into the class of RE juxtaposition possession nouns which were formerly alienable. These usages are regarded as ‘incorrect’ by older speakers (2002:216-7). While it is true that Tucanoan languages use juxtaposition for inalienable nouns, papers in this volume are replete with examples of the loss of the inalienable category or movement of items out of it in recent times in Austronesian and Australian languages, and it is by no means sure that this is solely a contact effect. The fragility of the inalienable category is discussed at the introduction to this volume, and in Nichols (1992), and Aikhenvald herself describes the changes as ‘regularisation’ ‘simplification’ and ‘impoverishment’ of structures under ‘linguistic stress’. This is a different type of explanation from strictly structural diffusion. Aikhenvald regards prolific variation as related to the stage of ‘on-going’ contact-induced change and associates ‘completed’ change rather with reduction of variation (Aikhenvald 2002:5; stages of contact due to Tsitsipis 1998).

Similarly to the use of notions of language death and obsolescence by Aikhenvald and others to explain synchronic phenomena (see McConvell and Florey 2005:4), explaining the nature of a phenomenon like level of variation by whether the change is in progress or completed can be teleological, and potentially circular. It is possible after all, for a change to be 'completed' in the sense of going no further, while still in a state of high variation (as when contact influence may be producing dialect or even language splits); and in the kind of case stressed by Aikhenvald herself, where variants develop distinct functions and stabilise. The issue is then to examine the mechanism whereby rampant variation, which arises from different groups of speakers being exposed to different models and producing different innovations, becomes levelled, and where it does not.

5.2 Takia, Waskia and the metatypy hypothesis

Another approach to prediction of language contact effects is that of Metatypy, proposed by Malcolm Ross (1996, 2001). This model involves an implicational hierarchy which predicts the order in which elements from a language in contact will be adopted. The first phase of adoption will involve conceptual schemas and 'ways of saying things' followed by grammatical patterns, first syntactic, then morphological, and only at a late stage, the form of lexical items themselves. This general view is similar to that supported by Aikhenvald (2002:12,272) which she calls the 'from top to bottom' view of direction of diffusion, citing antecedents in Matras (1998) among others. In the case of the Vaupes region of Amazonia studied by Aikhenvald, there is a strong cultural inhibition against borrowing of lexical items which may partially explain this pattern. Metatypy is not a direct competitor to Myers-Scotton's view since it is seen by Ross as only one of a number of possible scenarios in language contact, and does not apply to situations of code-switching or its outcomes (in fact in the examples used it is not clear whether code-switching was practiced at the historical period relevant to the convergent changes discussed). The metatypy hypothesis would seem to have explanatory value, fitting, in particular, the well known cases of convergence between Indo-Aryan and Dravidian languages and for some of the situations cited by Ross, particularly of convergence between Austronesian and Papuan neighbouring languages. However when it comes to specific examples of possessive grammar in the key case of the absorption of Waskia (Papuan) features by Takia (Austronesian), the data do not immediately seem to conform to the predictions of the hypothesis, but need further interpretation. According to Ross, metatypy has progressed through the first stage (semantics) through clausal syntax, and partially through phrasal grammar, but has not affected the word level, as set out in Diagram 4.

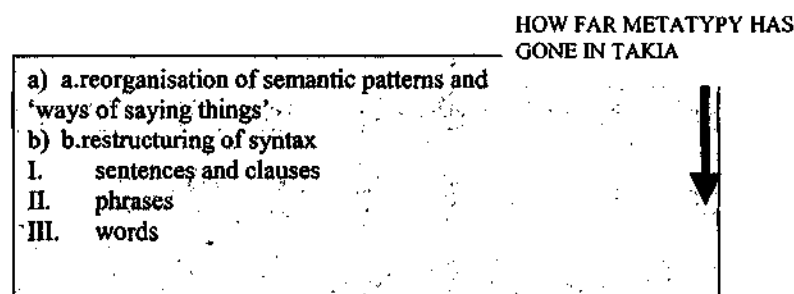


Diagram 4: Metatypy (Ross)

If, however, we examine his examples of possessives, the facts do not bear out this model completely. In the examples below, Arop-Lokep is used to show roughly how the possessive phrase would have been structured in a reconstructed proto-Oceanic (an eastern subgroup of Austronesian). Takia is the Oceanic language said to be subject to 'metatypy' whose grammar has shifted in several ways in the direction of its near neighbour the Papuan language Waskia (Ross 2003).

Arop-Lokep (Oceanic Austronesian)

- (25a) *numu ke tool in*
 house from man that
 'that man's house'

- (26a) *natu-nu*
child-his/her
'his/her child'

Takia (Oceanic Austronesian, with Papuan influence)

- (25b) *Kai sa-n ab*
Kai CLASS-his house
'Kai's house'

- (26b) *ing tama - n*
he/she fatherhis/her
'his/her father'

Waskia (Trans-New-Guinea Papuan)

- (25c) *Kai ko kawam*
Kai from house
'Kai's house'

- (26c) *nu ko n<u>et*
he/she from <his/her> father
'her/his father'

Arop-Lokep has two types of possessive, EMR with the M having an ablative source, and EP. Takia also has the second type but with an obligatory free pronoun to the left, REP. The other type features a classifier with a pronominal suffix, RCPE, an innovation which is not found apparently in either the Oceanic or Papuan languages offered for comparison. Waskia has RME with the postposition possibly from an ablative source, and a type used with the kinship term RMPE, where P is a pronominal infix.

One feature which might be seen to result from Waskia influence in Takia is the fact that the possessor precedes the possessed noun (RPE) as in the Waskia case (RME) and unlike the more general Oceanic order (EMR, as in Arop-Lokep). However as is already clear from these abbreviations, the element intervening between the two NPs is not of the same kind in Takia—a class marker with a pronominal possessive suffix—as in Waskia—a postposition of wide functionality including ablative. In the examples with pronominal possessives, similarly, the ordering of the possessor and possessor in Takia appears to have shifted towards that in Waskia, and away from the Oceanic model. Once again however, the actual functions of the morphemes involved are quite different, with Takia retaining a reflex of an Austronesian possessive pronominal suffix on the possessed kinterm, but no trace of the *ko* postposition on the possessor found in Waskia. There is certainly no one-to-one mapping between functional elements in Takia and Waskia here, and changes may be counted among the 'more subtle' effects of accommodation between these languages which Ross refers to (2001:142).

One way to interpret this within a version of the metatypy framework would be to say that only the level of gross word order in the NP (possessor-possessed) has been affected, but not more specific ways of linking elements. This restatement of the hypothesis bears some resemblance to the view of Bickerton about possessives in Creoles, cited above in Section 4.2, that the superstrate language (Germanic or Romance respectively) might have determined the ordering of elements in RE and ER constructions, even though the grammar of both originally involved additional morphology.

5.3 The 4-M Hypothesis and doubling

Carol Myers-Scotton and colleagues (e.g. Myers-Scotton 1993, 2003) have developed a theoretical framework for dealing with grammatical change in language contact situations, beginning with code-switching constraints, but later extending this to a number of other situations. In what Myers-Scotton now refers to as 'classic' code-switching, there is a Matrix

Language which sets the morpho-syntactic frame of the clause, and in particular determines which language the system morphemes will be drawn from, and their order. The distinction between content and system morphemes is crucial in this framework and corresponds roughly—but not exactly—to the distinction between lexemes and functional morphemes, or open and closed class items (Myers-Scotton 2002:70ff).

In the more recent work (the 4-M model) the system morphemes are divided into three types: early system morphemes; bridge late system morphemes; and outside late system morphemes. According to this theoretical approach, these distinctions predict how morphemes will behave in code-switching. But some data were problematic for the MLF model (Myers-Scotton 1993). For instance, Muysken (2000:173) argues that doubling of plural morphology—plural morphemes inserted from both contributing languages—is a counter-example to the System Morpheme Principle of the MLF model, since the resulting structures do not conform to the morphosyntactic constraints of either of the contributing languages. Myers-Scotton responds (2002:91-2) that her more recent 4M model captures a new generalisation that doubled morphemes are all 'early' system morphemes, which includes plural morphology. However this explanation does not seem to work with doubled possessives, since possessive morphemes are 'late bridging' not 'early' system morphemes. However such aberrant structures tended to be seen as 'compromise strategies' in the earlier MLF model, a bundle of phenomena that resulted from clashes between the language grammars, but whose forms were not specifically predictable. In the more recent 4-M model, though, the possibility of doubling is explained by the fact that plural morphemes are 'early system morphemes' together with the Early System Morpheme hypothesis (Myers-Scotton 2003:92): only early system morphemes may be doubled in classic codeswitching.

The possessive 's of English or 'equivalents' like French *de* are typical late bridge morphemes (Myers-Scotton 2003:75), since they link elements within the NP, rather than being activated by elements outside the immediate phrase like verb agreement and (at least some) case marking, which are classed as late outsider morphemes. However as is clear from the examples cited by Clyne (2003:82-83) including the example of Croatian-English code-switching (27) below (his 22), doubling of possessive morphemes is rather common:

- (27) *Imam moja Mam-in-s sestra je tu* (*italic* - Croatian; **bold** - English)
 I-have my mum-POSS-POSS sister be here
 'I have my Mum's sister here too'

Further examples in a number of the other papers in this volume and elsewhere (e.g. Florey 2005) testify that such possessive doubling is far from rare, both as a current phenomenon and as a frozen residue of early contact interaction. This casts doubt on the generalisation about doubling based on the 4-M classification. Alternatively one might argue that possessive morphology is 'early' in some languages and 'late' in others in terms of the 4-M model, but given that one of the morphemes in the above example is English 's—a key exemplar of a late bridge system morpheme in the model - this does not seem a promising solution. One might also take advantage of Myers-Scotton's restriction of the late system doubling hypothesis to 'classic codeswitching' to rule Clyne's and similar examples out of account, and attribute these to 'composite codeswitching' (Myers-Scotton 2003:105; see Amuzu 2005 for discussion). Given the relative lack of precision about how the latter is constituted at this stage of research, care should be taken not to use this as an escape hatch for troublesome data.

Despite their apparently discordant predictions, there is some level of congruence between Ross's metatypy model and Myers-Scotton's 4-M model. Both are based on models of speech production and regard the formulation of conceptual units as prior to more detailed grammatical instantiation. Further, if we return to earlier discussion of the 4-M model we should remind ourselves that it was stipulated that some constraints work only for 'classic codeswitching'. The complement of this category for Myers-Scotton and colleagues is 'composite codeswitching'. Despite recent advances in the description of this type of contact phenomenon, it remains less well defined than the 'classic' type. Rather than the morpho-syntactic elements being strictly inserted by the Matrix Language except in Embedded Language Islands, here elements of both languages can be combined in the grammatical frame of phrases, through 'compromise strategies' and 'convergence'. 'Convergence' in a 'composite matrix language' in particular has parallels to the operation of 'metatypy' since it involves the borrowing of ways of expressing ideas in phrases and syntactic patterns from a contact language

without necessarily borrowing lexical items. A number of the types of contact effects on possessive constructions are of this structural diffusion type, apparently importing a pattern from a new, superstrate language, but adapting existing resources within the old language, rather than borrowing a possessive morpheme.

6. Conclusions

Substrates and contact diffusion have had effects on the development of possessive constructions in many languages, but these effects are not always directly or unambiguously the result of copying from substrates or adstrates. Examples of possession grammar have been critically examined in this paper and the results yield a more complex picture of interaction between internal and external developments. In these cases the contact effect is less straightforward than it at first appears and requires reinterpretation. However this exercise has enabled us to begin sharpening some of the tools of analysis. One starting point has been the 4-M model of Myers-Scotton, but we have seen that this requires more precision in how the ideas of 'composite code', 'compromise strategy' and 'convergence' are handled. Ross's idea of metatypy, while not able to predict outcomes completely in its present form, may be amenable to enhancement and perhaps unexpected convergence with the 4-M model. The paper also has begun to chart the other main theme of the workshop, variation. It is quite common for such variation to be rampant especially in language shift situations (see also Florey 2005), and even where there is long term stability, possession seems to be a grammatical region where use of several alternative constructions, some due to language contact, is quite common. While interaction approaches which utilise such notions as 'compromise strategy' and 'convergence' may be criticised for not predicting specific outputs, they may have the advantage of predicting a range of results, which may be closer to what is found at least in the early phases of interaction. The elimination of some of these variants in stabilisation may result from a dynamic feedback process between markedness and frequency. These aspects need more work, but possibly Optimality Theoretic approaches could be utilised in modelling them.

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