

Tayo pronouns: a sketch of the pronominal system of a French-lexicon Creole language of the South Pacific

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1. Introduction

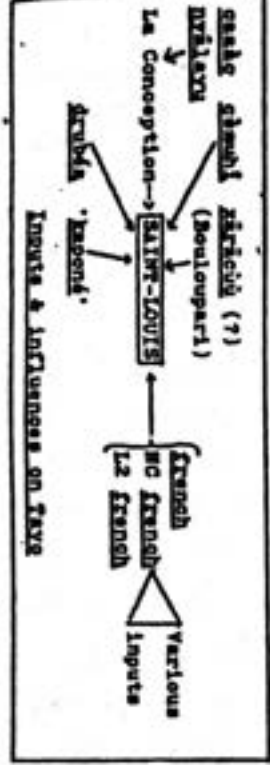
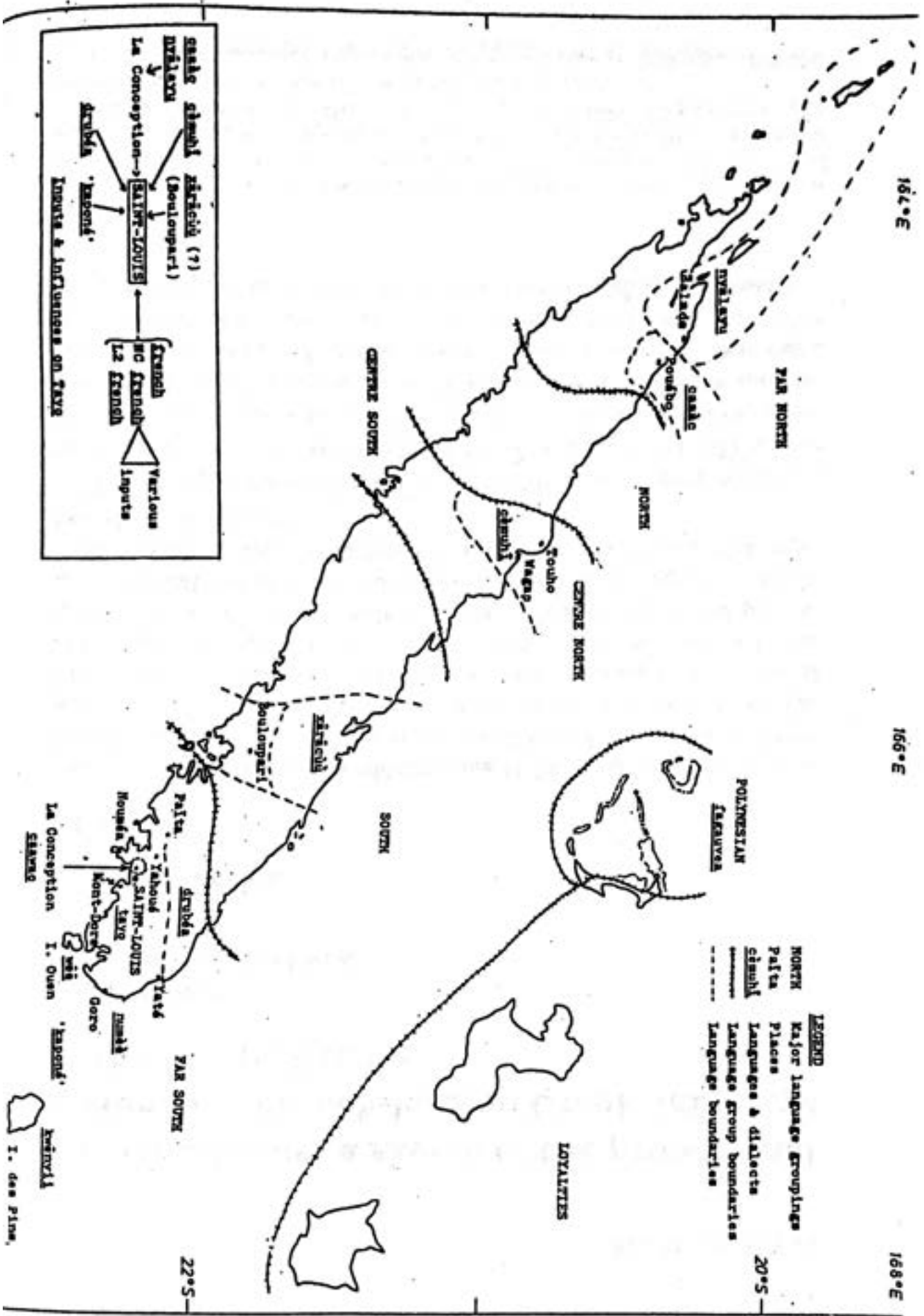
1.1 Tayo

Saint-Louis is a Melanesian village some 15 km from Noumea, in New Caledonia. It is situated adjacent to the Native Reservation (*Réserve Autochtone de Saint-Louis*, 519 hectares) on the left bank of the Thi River. The language spoken there is a Creole language whose lexical base is predominantly derived from French¹. It is referred to by its speakers as *tayo*² or as *le patois (de Saint-Louis)*. Given the pejorative connotations that the word *patois* often has in French, it would seem a positive move for linguists to adopt the more distinctive *tayo*, henceforth capitalised.

Tayo has not attracted much attention. It is mentioned in passing by Rivierre (1973:17); Brou (1982:87) and Marion (1983:148) devote to it a couple of short paragraphs of a general nature; in 1978, A.-G. Haudricourt made a recording on cassette of a few sentences and two brief folk-tales (about 10 minutes in all). The existence of Tayo came to my attention in early 1987 (Corne 1987); in November 1988 a few hours were spent at Saint-Louis with two native and two non-native

¹This paper is based on research supported by Oxford University (through Peter Mühlhäusler) and by the Department of Romance Languages of the University of Auckland. It is a revised version of a paper presented to the Eighth New Zealand Linguistics Conference, Auckland, May 1989. I am grateful to participants for useful comment and owe special thanks to Jim Hollyman.

²For the origin and early attestations of the word *tayo*, v. Hollyman 1983:133-136.



LEGEND
 NORTH Major language groupings
 Places
 saibe Languages & dialects
 Language group boundaries
 Language boundaries

Comme

I. des Pins
 I. Ouen
 I. Ouen

speakers of Tayo³. All data provided by the latter were checked with the former, but given the limited data base as well as the current paucity of information regarding the social history of Saint-Louis, this paper is necessarily somewhat tentative (cf. also Corne, in press a & b, & ms).

1.2 Social history

Saint-Louis (StL) is in fact a European artefact, a village created by the presence of the Catholic (Marist) Mission⁴. After the founding of Noumea in 1854, the French administration granted to the Mission lands straddling possible invasion routes and encouraged settlement there in order to protect the fledgling town. The Mission brought in Melanesian converts to people the area. In 1855, the first arrivals settled at La Conception, some 10km from Noumea: they came from Balade and Pouebo, and spoke respectively Nyâlayu and Caaàc, two neighbouring languages belonging to the same, Far North, linguistic group (v. Map). The following year a first attempt was made to launch the settlement of StL, near the sea: the Melanesian converts were from Touho, speakers of Cèmuhi, a three tone language which is the sole member of the Centre North group. There were disputes with local tribes, and the settlement was abandoned. In 1859, a second attempt was made at the present-day site of the Mission, this time with success. Over the following years, other converts, this time from the southern regions of New Caledonia (NC), joined those from Touho: they came from Yahoué, from the Mont-Dore, from Ouen Island, and from Païta. They came too from Bouloupari, refugees from the Melanesian uprising of 1878 and the repression that followed. Linguistically, most of these people were speakers of languages of the Far South Group (two tones): Drubéa and 'Kaponé'⁵. Those from Bouloupari may have

³I am grateful to Joseph Katé and Luc Dawano (native speakers of Tayo) and to Vincent Holopopo and Apolosio Gahetau (non-native speakers) for their willing assistance; to my son Philippe for bringing Tayo to my notice; to Jim Hollyman for passing on to me Haudricourt's recording; to Sabine Ehrhart for providing preliminary data from her own field investigation in the course of 1989; and to all those in Noumea and at Saint-Louis who helped in various ways.

⁴In what follows, the broad historical outline is largely derived from Brou (1982). Much detailed historical research remains to be done.

⁵The term 'Kaponé' is used by Leenhardt (1946:68), but not by more recent researchers. According to Haudricourt et al. (1979:18, 72-73), the Far South

been speakers of Xârâcùù or a related language/dialect, but this is not known.

The Melanesians of StL then, came from diverse parts of NC, and spoke often mutually unintelligible languages. Today, the patterns of settlement in the village reflect these various tribal origins. The village is not a 'tribe' in the traditional NC sense, although it has a *chefferie* and apparently functions as does any other Melanesian tribe/village. Rather, it is a group of people brought together, over several generations, as a direct consequence of the European presence.

The Mission undertook a programme of agricultural and associated activities: by the end of 1861, plantings of vegetables, cotton, coffee, and sugar cane were under way. Until the 1960s or thereabouts, the villagers of StL found employment in the Mission's various enterprises, in particular in the cultivation of sugar cane and rice. They were not alone, however, for members of other ethnic groups were also employed. Brou (1982) mentions convicts from the penal settlements in 1868 and 'Malabars' (Indians, from Réunion) in 1869, while a middle-aged villager mentioned groups of workers from Japan, Java, and Vietnam. Today, there is a large group of Wallis Islanders installed in the immediate vicinity of StL, as well as nearby settlers of both local and metropolitan French origin. At least one American GI married a local girl during World War II and still lives in the village. In other words, StL is not now and has never been an island within an island. It has shared in and been influenced by the forces which have shaped NC history and society as well as NC French. It may be supposed that the qualitative impact of this history has been the same (or very similar) on Tayo as it has been on NC French, although the quantitative impact may turn out to be different.

The Mission was also a centre for theological study, beginning with a boarding school in 1864, a school for advanced catechists in 1885, and a seminary in 1890. These activities, bringing together people from all over NC, would have contributed to the sociolinguistic mix at

group consists of two very closely related languages, Drubéa and the Numèè /Wèè /Kwënyii grouping (v. Map); cf. also Rivierre (1973:13-18). One StL villager, whose ancestors came from Mont-Dore, referred to his ancestral language as Kaponé; he also saw Kaponé and Drubéa as variants of the 'same' language, and went on to claim Numèè, Wèè, and Kwënyii as all being 'Kaponé'. The term 'Kaponé' appears to be unknown today outside of StL; its retention there presumably reflects former usage elsewhere, and justifies Leenhardt's use of it.

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StL.

From the foregoing, it can be seen that there obtained at StL, but not at La Conception (below), conditions likely to lead to pidginisation and creolisation. There were several mutually unintelligible languages in contact with the French spoken by the missionaries, by administrators, by settlers. Within the village and the Reservation, while some people presumably acquired a good knowledge of French, there was a preponderance of non-Francophones. Now it is known that at La Conception, contact has been maintained with the original (ancestral) homelands; there has been some intermarriage with local tribes. For StL such information is not yet known in detail: contact with tribes of the Far South region is maintained, but relatively few StL people speak the languages concerned; in any event, none of them are used as community languages at StL. It is clear that at some stage relatively early in StL's history, pidginised versions of French became the basis of intercultural and intertribal communication and the ancestral languages were largely abandoned.

According to informants, Tayo has been the sole mother-tongue of StL since around 1910, or perhaps earlier. That is, within three or at most four generations after the founding of the Mission in 1859, Tayo had emerged and jelled as a distinct code separate from either French or pidgin varieties of French.

1.3 Present-day situation

Today everybody in StL speaks Tayo. Knowledge of French, the official and principal vehicular language of NC and the language used in the Mission school and for religious activities, is widespread but very variable from individual to individual. Preschoolers are monolingual in Tayo and competence in French among older people is dependent on individual situations and capabilities. In spite of the high proportion of shared vocabulary, French and Tayo are not mutually intelligible.

It may be estimated that over two thousand people in all have a knowledge of Tayo, about 1000 to 1100 at StL, the remainder spread over the area from Païta to Ouen Is (including Noumea), at Yaté and Goro (marriages, migrations, neighbours). For some it is a second language, including a few Francophones whose activities bring them into frequent contact with native speakers (e.g. the Mont-Dore municipal

policeman, the dairy farmer next door, and such), and in particular including the Wallis Island children who attend the Mission school where Tayo is the language of the school-yard⁶.

Tayo is of course in contact with its lexifier, so that as well as the more-or-less unstable varieties of L2 Tayo, there appear to be French-influenced varieties used by native speakers. This is for the moment no more than a subjective impression, since data to hand concern speech used in the presence of, or elicited by, French speakers. Like many other Creole languages, Tayo is on the receiving end of pejorative value judgements. Even some native speakers, but especially those French who are aware of Tayo's existence, see it as merely a mish-mash of deformed French with no 'real' grammar.

2. Tayo: notes on phonology, syntax, lexicon

2.1 Phonology

The consonant inventory is essentially that of French. Some phonemes have allophones which reflect the Melanesian substrate: /b, d, g/ are often prenasalised, /r/ is apical, trilled or flapped except postvocally where it disappears, either lengthening or diphthongising the vowel. The vowel system has five oral vowels /i, e, a, o, u/ and two front rounded oral vowels /ū, œ/. The usual reflex of the French front rounded vowels is /i, e/, but /ū, œ/ occur in some words. There are two phonemically nasal vowels /ē, ō/. The latter varies between a low back nasal [ɔ̃] and a mid back nasal [ɑ̃]⁷. However, the entire question of nasality is not at present very clear. Nasal consonants (and perhaps even prenasalised stops) seem to nasalise partially a preceding oral vowel. Following a nasal consonant, only oral vowels seem to occur, e.g. /dema/ 'tomorrow' (< Fr *demain*). Reflexes of French nasal vowels can vary from oral to partially nasalised to fully nasalised vowels. It is not clear whether what is transcribed here as *mw* is a sequence of two phonemes /mw/ or a single velarised nasal consonant /m^w/,

⁶Marion (1983:148) claims that Tayo is dying out 'because it is bereft of a stable [i.e. traditional] base' (my translation), but this is not borne out by the facts.

⁷In NC French, the reflex of Std Fr /ø/ and /œ/ is /ɔ̃/. Tayo seems to follow a similar pattern, presumably for similar reasons of interference from Melanesian L1 (v. Hollyman 1964a:42; 1971:928).

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e.g. [mwōʒe] 'eat' (< Fr *manger*). And so on⁸. Thus the transcription used here, which is based on the Unified Orthography (for Mauritian Creole, or *Morisyen*) proposed by Baker & Hookoomsing (1987), is approximate and makes no claims to phonological accuracy. /ʃ, ʒ/ are represented as in French by *ch, j* respectively, phonemically nasal vowels by *eñ (em̃)* and *oñ (om̃)*, and front rounded vowels by *ũ, õ*.

2.2 Morphology and syntax

Word order is usually Subject + Predicate, i.e. S V O, but the reverse order Predicate + Subject occurs sometimes in contexts which remain to be defined.

Nouns are invariable as to number and gender, so there is no article or adjective agreement. There are four articles, including *eñ* 'a', which is also the numeral 'one'. The others are the plural partitive *te*, the postposed definite/demonstrative *-la* and its plural *le N-la*.

Verbs are invariable, although there are a few etymological doublets such as *ale* 'go' vs *va* 'future'. Tense, in the overwhelming majority of tokens in the data, is handled by contextual means or by the use of appropriate sentential adverbs (*yer* 'yesterday', *mena* 'now', *dema* 'tomorrow', ...). However, there are examples of preposed 'particles', as follows:

- (i) *va*, and a variant *a*, indicate either 'future' or perhaps 'definite future'. A number of tokens were collected from the informants, and a few occur in Haudricourt's recording:

(1) nu a tye kel kochoñ dema?
'which pig shall we kill tomorrow?'

It appears to be the case that *va* is optional.

- (ii) *dja*, and a variant *ja*, indicates 'past'. No examples of any Past marker were collected from the informants, but (*d*)*ja* occurs in Haudricourt's recording. Examples:

⁸Local Melanesian languages likewise have nasalisation of vowels which is both combinatory and phonemic, and /mw/ varies with /m/ in certain contexts. For details, v. Rivierre (1973).

- (2) en picho ja pase
'a bird flew by'
- (3) la chye si tet pu purp, la dja rigole
'he shat on the octopus' head (and) he laughed'

This particle also appears to be optional⁹.

Other aspects and moods are indicated by verbal periphrastic means: *(on)tra d(e)* 'progressive', *vyen de* 'immediate past, to have just', *fini* 'completive'¹⁰, *monya* or *kapab de* 'capability', *make de* 'nearly', *dwa* and *deve* 'obligation'.

There is no copula, although there is a presentative *se* which occurs in some constructions (interrogation, focussing):

- (4) se kwa sa le tombe?
it.is what REL PRON fall
'what fell?'

There being no copula, there is no passive either: sentences are always constructed actively with the agent in subject position:

- (5) lot-la sa le mon̄ti, ma va pini lia
the.one REL PRON lie I FUT punish 3sg.
'he who lies will be punished'

and adjectives can function as the predicate head:

- (6) mwa ma malad
I I ill
'I am ill'

Yes/No interrogation is handled by a rising melodic curve:

- (7) le pa deronje uso?
PRON NEG disturb 2pl.
'that's not disturbing you?'

For negative questions like (7), the *wi/non̄* response follows the

⁹In view of the importance of Anterior/Past marking in all other varieties of Creole French, considerable effort was expended in the field trying to provoke contexts where such marking might have been expected to occur, but to no avail. S. Ehrhart (p.c., June 1989), while stressing the tentative nature of her results to date, confirms *(d)je* as an optional Past marker.

¹⁰S. Ehrhart (p.c. May 1989) notes *fini* as 'Past'. The interpretation of 'completive' is guesswork on my part: *fini* does not occur at all in my data, except as a transitive verb 'finish' + direct object.

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same pattern as in other NC Melanesian languages: *wi* 'your statement is correct', *noŋ* 'your statement is wrong'. So in reply to (7), *wi* means 'that is not disturbing us', *noŋ* 'that IS disturbing us' - a source of numerous misunderstandings in French - Melanesian contact situations. Interrogative elements are all direct reflexes of French. The pronouns are *ki?* 'who', *kwa?* 'what', *kel?* 'which one'; they follow the verb:

(8) *ta di kwa?*

'what did you say? what are you saying?'

The interrogative adverbs are *u?* 'where', *koŋ?* 'when', *koŋbyeŋ?* 'how many', *purkwa?* 'why', *koma?* 'how'. The interrogative adjective is *kel?*, preposed to the noun.

Negation uses *pa* preposed to the verb:

(9) *ma pa monya vyeŋ dema*

I NEG able come tomorrow

'I can't come tomorrow'

Other negative adverbs are *jame* 'never', *nepli* 'no longer'. The negative of the existential verb (*e*)*na* is *napa*.

There is a subordinator *sa* which is used for relative clauses and in certain interrogatives (direct and indirect):

(10) *mek -la sa ma parle ave lia, la tombe malad*

man DEF REL I speak with him he fall ill

'the man with whom I spoke is ill'

(11) *se kwa sa le arive ave twa -la?*

it.is what REL PRON happen with you DEF

'what's up with you?'

(12) *ma pa kone sa ta ule*

I NEG know REL 2sg want

'I don't know what you want'

2.3 Lexicon

While no in-depth study of the lexicon has yet been attempted, a few observations can be made.

Many lexical items are simply French (including NC French) adapted to Tayo phonology, such as *tye* 'kill', *rigarde* 'look at', *mwoŋje* 'eat',

kompran 'understand', *benye* 'bathe', *oniwoye* 'send, throw', *plere/plöre* 'cry', all verbs derived from French infinitive forms. Verbs such as *di* 'say', *wa* 'see', *ule* 'wish, want', *dwa/deve* 'obligation' are derived from French finite verb forms, while *mor* 'die' is from the French past participle. Similar forms occur in other French-lexicon Creoles, but Tayo has its specificities, e.g. *monya* 'be able'.

Nouns display similar adaptations, e.g. *bi* 'penis' (< Fr *bitte*), *gel* 'face' (< Fr *gueule*). Tayo, like all other French-lexicon Creoles, often agglutinates the French etymological article to the noun (cf. Baker 1984): *dilo* 'water', *dife* 'fire', *disab* 'sand', *laser* 'nun', *latab* 'table', *lapli* 'rain'. It is not known at this stage how stable or how extensive this phenomenon may be.

While the bulk of the lexicon comes from French, some items come from Melanesian languages, e.g. *tchibwi* 'mouse, rat' (< *ciibwi* 'rat', Nyâlayu, Caaac /Caawac, Cèmuhi; cf. Xârâcùù *siibu*, Drubéa /Numèè *ciibu*), and there are words from other sources as well, e.g. *bizon* 'cannabis' (< *Bizon*, a brand of tobacco). Etymologies of Tayo words may provide valuable information. For example, there is no published information on what language was spoken at Bouloupari prior to the revolt of 1878; should any Tayo words of indisputable Xârâcùù origin be discovered, this would suggest that (a dialect of) that language was the tongue of the Bouloupari refugees who came to StL. Baker (1982b) has established for Morisyen a correlation between the numbers of speakers of non-Francophone groups and the proportions of the Morisyen lexicon derived from their languages. Is there an analogous correlation for Tayo?

2.4 As the above shows, Tayo syntax and morphology (and phonology to a lesser extent) are strikingly similar to those of other French-lexicon Creoles, but there are a number of specificities. Among these are the forms (and perhaps use) of the articles, the form *sa* of the relative pronoun, and the widespread lack of Past (or Anterior) marking. But it is in its system of personal pronouns that Tayo is perhaps most different from other Creoles of French lexical base.

3. The personal pronouns

The forms of the personal pronouns are partially displayed in Table I.

TABLE I
Tayo personal pronouns

		Subject & subject index	Independent pronoun	Unmarked dependent & subject index
Singular	1	ma	mwa	le
	2	ta	twa	
	3	la	lia	
Plural	1	nu	nu	
	2	usot, uso	usot, uso	
	3	sa, sola	sola, lezot	

The Table omits the possessive forms, which will be discussed in due course. Nor does it note variants which occur in rapid speech, where the singular forms of the independent pronouns are subject to simplification: *mwa ma*, *twa ta*, *lia* (disyllabic) *lya* (monosyllabic). There remain areas requiring further study (including the possessives): (i) there is a dual, constructed lexically and which appears to be optional: *nu de/dō*; (ii) there is presumably a semantic distinction between *sola* and *lezot*, the former indicating (sometimes) a specific group (the *-la* may be connected with the definite article *-la*); (iii) the posterior quality of the phoneme /a/ gives rise to forms of *ma*, *ta* which are phonetically rather close to *mo*, *to*.

3.1 Subject pronouns/indices

The subject pronoun appears either alone, preposed to the predicate, or as a subject index within VP when the subject function is filled by an independent pronoun or by a noun group (a lexical agent):

- (13) *sa wa mwa*
'they see/saw/will see me'¹¹
- (14) *dema ma tye mwa*
'I shall kill myself tomorrow'¹²

¹¹ Three different tenses are given in this gloss to illustrate the lack of tense marking. In all following examples, only one tense is indicated in the gloss.

¹² Note the use of the pronoun *mwa*, here used reflexively with no overt reflexive marking. For a debate on Creole French reflexives, v. Carden & Stewart (1988, 1989); Corne (1988, 1989).

- (15) lezot sa vyeñ wa mwa e sola sa reste
'they came to see me and they (another specific group)
stayed (behind)'
- (16) chyen-la la rule par ter
'the dog is rolling around on the ground'

3.2 The independent pronoun

This often occurs as subject, generally but not always followed by the subject index:

- (17) lezot sa wa mwa
'they saw me' (apparently = (13))

Adjectival predicate heads require both the independent and the index:

- (18) mwa ma malad
'I am ill'

The independent pronoun is also used as the object of a verb or a preposition, e.g. (13)-(15).

3.3 The pronoun *le*

This pronoun is maximally unmarked (for person and number). It occurs in three broad contexts in the data to hand, and sporadically in other contexts (after a lexical subject). These contexts are:

(a) as a subject which is (i) impersonal:

- (19) le botom mena lapli tombe
'it is fine now that it has rained'

(ii) inanimate:

- (20) le pa deronje uso?
'that's not disturbing you?'

- (21) le dur pu konvenk lezot

'it is hard to convince them, they are hard to convince'

(iii) indexed to a postposed subject

((21) above is perhaps an example, too):

- (22) le bon chigom-la

'the chewing-gum is good'

- (23) le fu lia

'he's mad'

(b) after a focussed independent pronoun:

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(24) *la di ke se lia le fe sa*

'he said it was he who did it'

(25) *nu di ke se nu le fe sa*

'we said it was we who did it'

(26) *lesot le wa mwa*

'THEY see me' (cf. (17))¹³

(c) after a non-personal pronoun:

(27) *person le wa mwa*

'nobody saw me'

(28) *ta wa loto sa le vyeñ?*

'do/can you see the car which is coming?'

(29) *se ki le vyeñ laba?*

'who is (that who is) coming over there?'

3.4 Possession

The possessive consists of Noun + *pu* + independent pronoun:

(30) *tete bi pu mwa*

suck penis POSS me

'give me a blow-job'

This is the citation form, and the only one accepted by the two native-speaker informants. However, the two non-native consultants claimed the following paradigm:

(31) *N ma/mwa/pu mwa, N ta/twa/pu twa, N pu lia,*

N (pu) nuzot/vuzot/lesot

(Note here the non-native forms *nuzot*, *vuzot*.) They opined that the non-use of *pu* was characteristic of younger speakers. These non-native intuitions receive some support from native-speaker data: (i) a child was overheard to use *N ma*; (ii) a speaker on Haudricourt's recording uses *tet ta* 'your head' twice; (iii) the same speaker has *tet pu purp* as well as *tet purp* 'the octopus' head'; (iv) one native-speaker consultant provided (32):

¹³The semantics of this example need to be checked. The sporadic occurrence of *le* after a lexical subject suggests that *le* may perhaps stand in for any subject index.

- (32) ta wa chigom -la le kole doñ lapo Ø
 you see ch.-gum DEF PRON stuck PREP skin Ø
 deryer pu twa
 behind POSS you
 'you see the chewing-gum's stuck to your backside'.

On the basis of these data there appear to be two possibilities. The first is that an original *N pu PRON* is subject to on-going phonetic erosion. The second is that the two are merely stylistic variants which reflect a former semantic distinction: in at least some Far North and North Melanesian languages of NC, there is indeed a semantic distinction between the possessive suffix construction, although the nature of the distinction varies from language to language (Hollyman, ms)¹⁴.

3.5 Transmission and evolution

If the pronominal system of Tayo is compared with the general Melanesian system, parallels are obvious. Tayo apparently does not have an obligatory dual/plural distinction, nor does it have in the first person dual/plural an exclusive/inclusive contrast. But there is the subject index within VP, there are the independent pronouns, and there are the possessive structures discussed above. The pronoun *le* is a dependent pronoun (or subject index) which is unmarked for person and number: the use of the marked subject indices has meant that *le* has been restricted to precise semantactic roles¹⁵.

The Tayo system, which shows evidence of both transmission and internal evolution, can be seen as revealing some of the influences which contributed to the formation of the language. First, there is clearly an adaption of French pronominal forms: *mwa*, *twa*, *nu*, *uzot*, *lezot*, *sa*¹⁶. Second, *ma*, *ta* may be reanalyses of the French possessive adjectives¹⁷,

¹⁴Both forms appear in S. Ehrhart's data (p.c.), which suggests that the first possibility is the more likely.

¹⁵Cf. the considerably more generalised role of *i* in Solomons Pijin (Keesing n.d. & 1988). The dispute between Keesing and Mühlhäusler (1987) concerns essentially the 'when' of *i* in Pidgin English, but Keesing is undoubtedly correct in seeing *i* in present-day Pijin as reflecting the Melanesian pattern.

¹⁶Popular French has *se* (Tayo *sa*) as a pejorative third person pronoun: *se veut être payé, mais se veut pas travailler* 'they/he/she want(s) to be paid, but don't/doesn't want to work'

¹⁷Cf. *my* as subject pronoun in Chinese Pidgin English (Baker 1987b).

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but are perhaps more likely to have evolved as 'eroded' forms of *mwa*, *twa*. Similarly, and by the same rule of deletion of [+hi, +voc, +cons] segments, *la* may have come from *lia*, itself perhaps from Fr *lui-là*¹⁸. *Sola* may be from Fr *ceuz-là*, or could be a descendant of Tayo *sa* + the definite article *-la* (back /a/ raised to /o/, cf. the rapid-style forms *mo*, *to* of *ma*, *ta*). While *uzot* is clearly from Fr *vous autres*, the variant *uso* shows, apart from loss of *-t*, devoicing of /s/ cf. *picho* 'bird' from Fr *pigeon*, where /ʒ/ → /ʃ/. *Le* is almost certainly a reanalysis of Fr *il est* (cf. note 18 concerning *la*). Finally, the way in which the pronominal system actually works is a diluted reflex of the Melanesian pattern, making substratal influence a near certainty¹⁹.

4. Discussion and conclusions

The foregoing shows clearly the potentially pivotal role of Tayo for theories of Creole genesis.

4.1 Tayo is the only French-lexicon Creole known in the creation of which Africans played no role: it is the product of assorted groups of displaced Melanesians using French lexical items to create a vehicle of community and interethnic communication. The parallel with the English-lexicon pidgin languages of the South Pacific is imperfect: in these cases the pidgin has remained an L2 for the vast majority of its speakers, creolisation (nativisation) being a relatively recent and somewhat restricted phenomenon. Thus, as L2s, these languages have perhaps been proportionately more influenced by their Oceanic substrates than has Tayo, where the early loss of the ancestral languages and the continuing influence of French have reduced the contribution of the substrates.

For what it is worth, it may be noted that Tayo is the only endogenous French-lexicon Creole: it arose in NC with NC Melanesian

¹⁸Or, *la* may be a reanalysis of Fr *(i)l a* 'he has', cf. the analogous derivation of the Reunionese perfective auxiliary *la* (Baker 1982a:211-216). In fact, given the phonology of spoken, popular, NC French, this is perhaps the likelier explanation.

¹⁹Popular French does have double pronouns: a tonic pronoun (e.g. *moi*) frequently precedes a cliticised atonic subject pronoun (*moi je...*). It also employs a resumptive, atonic clitic with NP subjects: *la femme elle ...* In neither case, pace speakers of Standard French and authors of school textbooks, is any particular emphasis involved. But this could at best have had a convergent, supporting role: the forms are different from those in Tayo, and in any event the role of *le* in Tayo cannot be explained by reference to French.

languages supplying most non-French input. (The endogenous status of Tayo has to be seen in the light of the fact that there was population displacement and loss of contact with the ancestral language – if not society; this is a feature of exogenous Creole genesis.) But the stark dichotomy established by some writers (e.g. Chaudenson 1986) between exo-/endogenous Creoles does not appear to have much to recommend it. It implies that the linguistic product of exogenesis is different from that of endogenesis, and what predictive power (if any) attaches to this hypothesis is unclear. There certainly does not appear to be any qualitative difference between Tayo and any other brand of Creole French: the Melanesian influence (pronouns, VS sentences) is no more extensive than that of the Bantu languages in Isle de France Creole (morphology, Baker 1984, 1989; preverbal markers, Corne 1983, Baker & Corne 1986; verb fronting, Corne 1986).

Tayo fills a gap in a crude chronological and developmental continuum. At one end of the continuum there are pidgin L2 varieties of French, such as Tây Bôy (Reinecke 1971) or Burundi Pidgin French (Niedzielski 1989). Then there are more elaborated varieties, such as the *français populaire d'Abidjan* (Hattiger 1983, Lescutier 1983), currently beginning the process of creolisation. There is Tayo, a recently emerged and jelled Creole. At the other pole of the continuum there is Isle de France Creole, which emerged and jelled in the 18th Century (Baker & Corne 1982, 1986; Baker 1982b, 1984), and the American Creoles of the 17th (Baker 1987a)²⁰. Pronoun placement (pre- or postposed to the verb), tense/aspect marking, and articles appear to be some of the defining features of this continuum; there are no doubt others²¹.

In NC, contact L2 varieties of French are common, both historically and today. For example, the Javanese L2 French described by Hollyman (1964b) is still extant²². While many Melanesians have an

²⁰ Reunionese is a levelled and partially creolised variety of French (Bollee 1977, Baker & Corne 1982) which does not fit on this particular continuum. For the genesis of 17th and 18th Century varieties of Creole French and their interrelationships, v. Baker (1987a).

²¹ Tense/aspect marking across this continuum seems to correlate (rather roughly, to be sure) with the development of the Morisyen preverbal marking system as attested in early texts (Baker 1982a:224-236), v. Corne & Niedzielski (in preparation).

²² A contemporary sample occurs on the recording *L'île aux cent visages*, produced by Jacqueline Sénès, PAN records (Noumea) P. 1021.

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excellent command of French, many others use L2 varieties ranging from adequate to very limited (Schooling 1982). Such was undoubtedly the case at StL throughout most of the period from 1856 to around the turn of the century (and perhaps later). The question then is to what extent Tayo reflects such contact varieties and to what extent it has evolved away from them towards its own norms (that it has done so is indisputable). The dearth of preverbal markers is reminiscent of a pidgin, for example²³, but the pronominal system as described here is far from the characteristic 'simplicity' of contact varieties of language.

An aside: the presence of workers of various origins in the rice paddies and cane fields alongside people from the village no doubt gave rise to diverse kinds of pidgin L2 French. These may well have had a minor role in the formation of Tayo. The presence of Indians ('Malabars') from Reunion might suggest some Reunionese input to Tayo, but no linguistic feature found so far is exclusively shared by Tayo and Reunionese²⁴. (The formal accident of *la* and *le* in both languages can be discounted, as their function in each is completely different.)

I see no point at this stage in speculating on how Bickerton's Human Bioprogram for Language (HBL) hypothesis (1981, 1984) will stack up against Tayo. The social history fits well enough, as far as is known to date, with that of Mauritius as described by Baker (1982a&b): the hedge is important, as it is not (yet) known when the last significant numbers of new inputs occurred (possibly the refugees from Bouloupari in 1878), nor when native speakers of the emergent Creole outnumbered pidgin speakers within the village. Baker argues that the timing of such demographic 'events' is crucial for the emergence and jelling of a (more or less) homogeneous Creole from a pre-Creole continuum, and hypothesises that the HBL (in some form) plays a crucial role within these parameters. One would therefore expect Tayo to have bioprogram-derived features. There appears to be at least one glaring omission: Tayo does not have an Anterior (or even

²³ Relexification of NC Pidgin English seems an unlikely hypothesis, although there were (and are) people from the New Hebrides/Vanuatu in NC. For Pidgin English in NC and the Loyalties, v. Hollyman (1976).

²⁴ Although NC French has a few borrowings from Reunion; e.g. *brédes* 'culinary preparation of leaves of certain plants', *bois noir* 'tree, *Albissia* sp., used often to provide shade for coffee bushes', *caféerie* 'coffee plantation', *chouchoute* 'choko, *Sechium edule* Sw.': v. Hollyman (1962).

a fully integrated Past) marker, which is one of the basic features predicted by the HBL (Bickerton 1984:182). However, since work on Tayo is in its infancy, a more complete picture of the social history and of the language itself is needed before Tayo can be used to check the predictions made by Bickerton's hypothesis.

4.2 Tayo is thus an important witness to the processes undergone by French in the pidginisation-creolisation cycle, to the role of the substrate in this act of language creation, and to the operation of universals in Creole genesis. It is already clear that Tayo poses a problem for those (mainly French-speaking) scholars who would like to deny substratal influence (e.g. Wittmann & Fournier 1983). It is equally obvious that substratomaniacs have a problem too: the genesis of Tayo is manifestly separate from all other French-lexicon Creoles, but shares with them a large number of features²⁵. And it is conceivable that Tayo will lead to important modifications in the HBL hypothesis and perhaps ultimately to a unified theory of language creation. Whatever the future of Creole studies may hold, Tayo can no longer be overlooked.

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²⁵Chaudenson (1986) is correct in stressing the importance of the French input in Creole formation. His hypothesis that 'Creoles result from an "acceleration" and a "radicalisation" of processes which are essentially internal to the functioning of French, without excluding a priori the influence of other languages' (1986:86; my translation) is however grossly overstated. Neither the tense/aspect marking system of Morisyen nor the pronominal system of Tayo can be ascribed to any kind of French, anywhere or anywhen.

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King Binoka of Abemama and the Pacific Pidgin lineage

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1 Background

The atoll of Abemama, now part of the Republic of Kiribati in the central Pacific, has played a very unusual role in the history of the islands of this region. During the nineteenth century, the people of this atoll were able to control the impact of European cultural, political and economic intrusion in a way that turned out not to be possible in any other part of the Pacific. This period of holding Europeans at bay ended in 1892, just after the death of King Binoka, who had exercised almost totalitarian power over the atoll for a decade and a half, with the hoisting of the Union Jack and the establishment of British government control throughout the Gilbert Islands.

Abemama is also famous as the place where the noted author Robert Louis Stevenson stayed for eight weeks during 1889, before he chose to live, and eventually die and be buried, at Apia in Western Samoa. His book *In the South Seas*, published posthumously in 1900, includes accounts of his travels through the Marquesas, Hawaii and the Gilberts. The account of his stay on Abemama is of particular interest because of his close association with King Binoka towards the end of his reign. King Binoka is especially interesting as a character because of his command of what Stevenson (1900:298) called a 'queer personal English'. It is the characteristics and significance of this English that I wish to examine in this paper.

2 Pidgin in the central Pacific

Clark (1979-80:27-35) refers to the emergence of whahe terms 'South Seas Jargon' throughout much of Polynesia and Micronesia in the first

decades of the nineteenth century. The spread of this means of communication was largely associated with the whaling industry with its multilingual crews and their dealings with people on shore. By the 1830s, Clark (1979-80:28) observes, a visitor could expect to find speakers of South Seas Jargon on almost any island in Polynesia and Micronesia.

The precise nature of South Seas Jargon is not really known because documentary attestations are sporadic and variable in quality. Clark (1979-80:35) speaks of a language having a vocabulary of perhaps only a few hundred words. He says that we might expect, on a priori grounds, that South Seas Jargon would have been structurally highly unstable, given the limited amount of contact involved between whalers and Pacific Islanders. However, he also cautiously states that documentary records of South Seas Jargon speech are too restricted in scope and geographically too dispersed to allow us to say conclusively that this was the case.

An element of dispute has emerged about the nature of the structure of South Seas Jargon. Mühlhäusler (1979:56-59) agrees with Clark, suggesting that this was a jargon with unstable structure and no recognisable 'speech community'. Keesing (1988:15-25), however, takes the view that in the islands of the central Pacific, i.e. Pohnpei, Kosrae, the Gilbert Islands and Rotuma, this 'jargon' was considerably more stabilised and structurally more developed than has been accepted in the past. Not only this, but the fact that there were constant sexual dealings between whaling crews and Micronesian women prompts him to argue that there were even fluent first-language speakers of 'South Seas Jargon'.

Clark (1979-80:35) mentions the work of Ken Rehg, who reported the existence on the Micronesian island of Ngatik of a special 'men's language' consisting of ordinary Ngatik words with an admixture of English, including some words that apparently derive from South Seas Jargon. In the 1830s, the local males were apparently massacred by a group of European sailors, who then took up with the local women. The products of relationships such as these could perhaps have been a community of fluent speakers of creolised 'South Seas Jargon', though obviously the present-day 'men's language' of Ngatik would be a very poor guide to what this might have been like structurally.

Establishing the nature of South Seas Jargon is of considerable importance in order that we can properly understand the development

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of other Pacific Pidgins, including the existing varieties of Melanesian Pidgin, i.e. Tok Pisin in Papua New Guinea, Pijin in Solomon Islands and Bislama in Vanuatu. South Seas Jargon, when it first became established in the islands of New Caledonia and southern Vanuatu in the 1840s, represents a direct forerunner to what was subsequently known there as Sandalwood English. This then had a major input into the Plantation Pidgins that developed in Samoa and Queensland which in turn had major inputs into the modern varieties of Melanesian Pidgin.

3 Abemama and early European intrusion

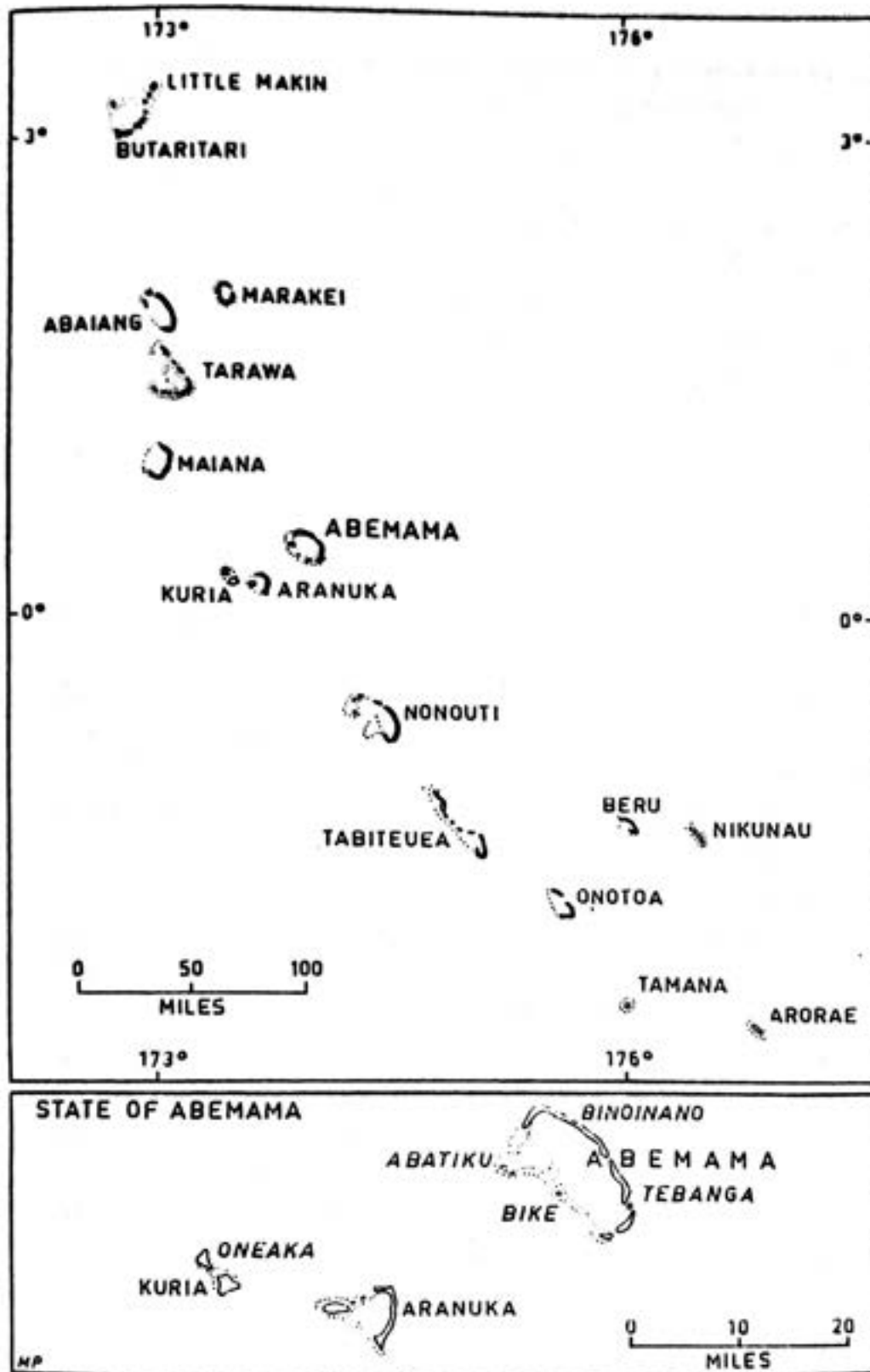
European contact with the atoll of Abemama in central Kiribati began when Captain Bishop in the *Nautilus* paid a brief visit in 1799 (Maude 1970:204). Regular contact was not to commence until 1821, however, when whaling ships started to call. Initial contacts between Europeans and the people of Abemama were not friendly, but by the 1830s, amicable trading relations had become established. In 1835 a sea slug station was opened on Abemama, and the first European beachcomber landed on Kuria, a dependency of Abemama, in 1838 (Maude 1970:205). During the 1840s, Abemamans were conducting a roaring trade with the crews of the increasing numbers of whaling vessels, with the chief commodity being the sale of the sexual favours of serf women (Maude 1970:206).

By 1851, the Europeans on Abemama had, by various means, made themselves extremely unpopular and King Baiteke, who had just come to power, ordered that every foreigner but one on Abemama and its dependencies of Kuria and Aranuka should be killed (Maude 1970:206). Foreign trade fell into the hands of Richard Hansell, an American who was spared from the massacres, apparently because he was sympathetic to the viewpoint of the king, and was able to express this because he spoke the Kiribati language with native-speaker proficiency (Maude 1970:207).

Foreign traders calling at Abemama were henceforth restricted to the unpopulated islet of Abatiku, located at the mouth of the lagoon, which functioned as a strictly controlled port. Anyone wishing to trade in King Baiteke's domain was required to anchor there and wait for the arrival of an emissary of the king's administration. The captain would

inform the emissary through an interpreter that he wished to buy coconut oil, and this request was then ferried back to the mainland for the king's consideration. If the request was approved, trade was conducted in a specially constructed building on Abatiku, away from the general population of Abemama, though a canoeload of local women was generally provided as commercial sexual partners, and they stayed on board ship for the duration of the visit (Maude 1970:208). King Baiteke himself was seldom seen by Europeans as he rarely visited any of the trading vessels that called at his domain (Maude 1970:211). Recruiting of labourers from Abemama for overseas plantations, which was drastically affecting other parts of Kiribati, was also prohibited on the atolls of Abemama, Kuria and Aranuka (Maude 1970:218).

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Map 1: The islands of Kiribati and the Kingdom of Abemama (Maude 1970:202)

King Baiteke's eldest son, Binoka, was born in the mid-1840s, at the heyday of the period of unrestrained foreign commercial contacts. A mission-trained i-Kiribati teacher from the northern atoll of Butaritari was brought to Abemama in 1870 to provide Binoka, by then in his late twenties, with an education. He learned some arithmetic, some geography and also how to read and write in Kiribati (Maude 1970:213). Stories circulated later as to whether the heir apparent became star pupil through his own intelligence or by having competitors decapitated, but all questions ceased when schooling was made a royal prerogative in 1878 and competition was eliminated (Maude 1970:213). At any rate, Binoka's education produced a man who was determined to benefit in whatever way he could through contact with Europeans, and he became a firm admirer and acquirer of European material goods. With his education, Binoka became his father's emissary in dealing with trading vessels, a role which he apparently relished as a source of material possessions and prestige (Maude 1970:217).

In 1878, King Baiteke abdicated in favour of Binoka and handed over to him his highly efficient and centralised administration. Binoka at this time was in his thirties. The new king was not the efficient ruler that his father was. He almost ended up signing Abemama away as a German protectorate shortly after his accession to power (Maude 1970:214), and he alienated both nobility and commoners with his wild temper, territorial expansionism, ruthless control of power internally, and his wish to curry the favour of Europeans. His reign saw several revolts which were successfully, though brutally, suppressed.

King Binoka's reign saw the slow erosion of the administration that he had inherited from his father. He himself was grossly overweight and suffered from asthma (Maude 1970:222). Despite his many wives, he was reportedly impotent and produced no heirs (Maude 1970:212). He died in 1891, when he was only in his forties, and in the following year, the Union Jack was hoisted over Abemama and its dependencies.

4 South Seas Jargon on Abemama

From what we know of whaling and sea slug operations elsewhere in the Pacific, we would expect that during the course of the 1830s and 1840s, some Abemamans would have acquired some kind of competence in what has been referred to above as South Seas Jargon. I

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know of no references specifically to the speech of people from Abemama in this period which would confirm this presumption, though Clark (1979-80:30) and Keesing (1988:17-20) both provide a number of examples of speech from other Micronesian islands that arose under comparable conditions. In severely curtailing the contact between Abemama and the outside world after 1851, King Baiteke would probably have effectively prevented the further spread of any knowledge of South Seas Jargon in his domain.

Whether King Baiteke was able to speak South Seas Jargon himself is not known, though the fact that he chose a trading master for the reason of his ability to speak in 'English' (Maude and Leeson 1968:259) suggests that he did not. King Binoka, however, played a much more hands-on role in trading with Europeans, and we have plentiful evidence that he did speak 'English'. What we do not know is exactly how he learned it. We cannot rule out the possibility that he learned it as a child when foreign trade on Abemama was completely unrestrained, though he would not yet have been ten years old when King Baiteke imposed his restrictions on foreigners. As mentioned above, Binoka became his father's trading emissary shortly before he came to power himself, so it is perhaps more likely that it was with his contacts with Europeans when he was in his early thirties that he first learned his 'English'. Thus, King Binoka's speech should reflect the South Seas Jargon that was spoken in Kiribati in the 1870s, though there is still an outside possibility that it could reflect the speech of an earlier period.

Our knowledge of the nature of King Binoka's English comes largely through Robert Louis Stevenson's fascinating account of his two month sojourn on Abemama in 1889, before he finally settled in Apia in Western Samoa. While in Samoa, Stevenson seldom dealt with commoners, preferring the company of chiefs (Mackenzie 1978:159). He apparently also led very much a chiefly lifestyle while on Abemama. Apart from an i-Kiribati retinue of five who were allowed into Stevenson's compound, which he called 'Equator Town', all of the dealings of his party were directly with King Binoka himself (Stevenson 1900:318). In fact, even these personal servants were only to receive orders from the king, and not from members of Stevenson's household (Stevenson 1900:301). In Stevenson's book *In the South Seas*, we are therefore treated to frequent accounts of Stevenson's conversations with the king.

There are several published references to the nature of King Bi-

noka's 'English'. Stevenson (1900:298-99) describes it as:

... his queer personal English, so different from ordinary "Beach de Mar", so much more obscure, expressive, and condensed.

Stevenson's cook made a similar observation on the unusual nature of the king's speech:

The king spoke English, but a variety entirely his own. It was quite different to the Bèche-de-Mer of the wild islands¹, or the pidgin English spoken by the Asiatic Polynesians. [MacCallum 1934:262-63]

With so little record of how other people on Abemama spoke 'English', it is difficult to know in what ways King Binoka's speech could have been so noticeably peculiar. One observation suggests that it was possibly his wider range of vocabulary, rather than its structure, which impressed European observers:

His vocabulary is apt and ample to an extraordinary degree. God knows where he collected it, but by some instinct or some accident he has avoided all profane or gross expressions. "Obliged", "stabbed", "gnaw", "lodge", "power", "company", "slender", "smooth" and "wonderful", are all a few of the unprecedented words that enrich his dialect. [Stevenson 1900:319]

In the absence of any contrast with other speakers of South Seas Jargon on Abemama at the same time, it is difficult to know what Stevenson meant when he described King Binoka's speech as 'obscure'. This could perhaps be interpreted as meaning that he spoke with unusual fluency, which might have made his non-standard grammatical structures more difficult for English-speakers to pick up.

As an indication of the nature of the information we have on King Binoka's speech, we can refer to the following account by Stevenson of how the king went about assessing the characters of visiting Europeans, in this case Stevenson (1900:300-310):

... The counts upon which whites have been deported are mainly four: cheating Tembinok'², meddling overmuch

¹ That is Vanuatu, or perhaps Melanesia in general.

² Tem is an honorific before men's names in Kiribati.

with copra, ... 'peaking'³, and political intrigue. I felt guiltless upon all; but how to show it? I was informed abruptly that I had stood the ordeal. "I look your eye. You good man. You no lie," said the king I no tavyv good man, bad man. I look eye, look mouth. Then I tavyv. Look eye, look mouth," he repeated.

The total corpus of King Binoka's speech in Stevenson's account comes to about 350 words. Given the paucity of data on South Seas Jargon, especially data coming from a single location and at a single point in time, this source goes a long way towards providing the raw material for an improved idea of the nature of Pacific Pidgin in the early stages of its development.

Clark (1979-80:28-35) lists a number of diagnostic structural and lexical features that he attributes to South Seas Jargon speech. Each of these features will be tested in turn against attestations of King Binoka's speech:

- (a) The use of the preposition *olsem* 'like, as'. This occurs several times in King Binoka's speech, e.g.
I give them tobacco. They work for me all the same brothers. [Stevenson 1900:322]
- (b) The use of *baimbai* as a future marker. Sentences with unambiguously future reference are difficult to find in quotations of King Binoka's speech by Stevenson, though it would appear that he generally did not mark futurity. Stevenson's cook, however, does provide an example of a sentence in the future marked with Clark's diagnostic *baimbai*:
I likum mobetta, my cook no savee how, bimby cook he come my outcche, get good boone (wife). [MacCallum 1934:268]
- (c) The use of *planti* 'much' as a prenominal modifier. King Binoka is attested as having used this construction, e.g.

³This is the verb 'speak', presumably in this context meaning 'speaking out of turn'. King Binoka had trouble with English 's'. Sometimes he omitted it, and at other times, he pronounced it, but for him it was in complementary distribution with 't', 's' occurring before 'i' and 't' elsewhere, following the pattern in his own language. Thus: 'suppose' became 'tuppoti' (Stevenson 1900:299) and 'savvy' became 'tavyv' (Stevenson 1900:315).

"Plenty money!" cried he, with contemptuous displeasure. [Stevenson 1900:341]

- (d) *Sapos* occurs in South Seas Jargon as a marker of conditional clauses, and this feature is also common in King Binoka's speech, e.g.

Tuppoti mitonary think 'good man': very good. [Stevenson 1900:299]

- (e) Preverbal *tumas* 'very, a lot' is a feature attributed to South Seas Jargon. This is not present in King Binoka's speech, though he is reported as having used *tumas* post-verbally, feature which is reminiscent more of later Melanesian Pidgin than the earlier South Seas Jargon:

I think he tavy too much. [Stevenson 1900:315]

- (f) Clark also associates a number of lexical items with South Seas Jargon, namely *gat* 'have', *save* 'know, understand', *nogud* 'bad', *pikinini* 'child', *bulamakau* 'cattle, beef', *kaj* 'get, receive' and *kaikai* 'eat, food'. The first two of these are well attested in King Binoka's speech. The use of *save* is illustrated by the preceding example, and the use of *gat* in the example below:

Me got plenty powa, just like Victoreea. [MacCallum 1934:26263]

The use of *nogud* is not actually attested in King Binoka's speech, but it does occur in the speech of another dignitary from Abemama who was commenting to Stevenson on King Binoka's capriciousness:

Suppose he like you, he good man ... no likee, no good. [Stevenson 1900:327]

The king is not attested as having used *kaj*, but Stevenson's cook does refer to a commoner during the same visit as having said the following:

Him fella along hole plenny sick, catchem die. [MacCallum 1934:47]

The absence of *pikinini*, *bulamakau* and *kaikai* is not significant since there is no reference to children, cattle or food in utterances attributed to King Binoka.

There are some other South Seas Jargon structural features that Clark recognises as being diagonistic which are not present in King

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Binoka's speech. These include the pre-verbal past tense marker *bin*, the early comitative use of the preposition *long*, the pronominal plural marker *ol* and the verb *stap* meaning 'be (in a location)'. The absence of these particular features should not be regarded as significant, however, as Clark (1979-80:30) notes that they are only rarely attested in other South Seas Jargon texts anyway.

There are several structural features of later Pacific Pidgins of which Clark noted as having ambiguous status in South Seas Jargon texts. The speech of King Binoka can therefore possibly throw some light on the development of these features. These are each discussed separately below.

(a) The genitive preposition *blong*

Clark (1979-80:31) points out that there is only a single instance of a South Seas Jargon speaker using *blong* prepositionally, from a speaker in Fiji in the 1840s:

How you do? Ah! You come see me; all white men see me; man belongen ebery place see me; me like um man belongen noder place. [Erskine 1853:461]

He suggests that the appearance of *blong* in this quotation perhaps represents an idiolectal aberration, as this was not otherwise destined to develop until later, and only in Melanesia. However, King Binoka is also reported as having used this construction:

"A cobra berong me," observed his majesty with a wave of his hand; and he counts and sells it by the houseful. [Stevenson 1900:293]

There are two possible ways of interpreting this. First, that Clark was correct in suggesting that the Fijian speaker just referred to from the 1840s represented an aberration, and that the preposition *blong* was indeed a later development. After all, the Fijian is not reported as having used *blong*, but 'belongen', suggesting that he may still have been treating this as a verb rather than a preposition, i.e. 'belonging'.

This would allow for the possibility that prepositional *blong* could have evolved independently in later Melanesian Pidgin, as well as in the Pidgin learned by King Binoka in the Central Pacific. King Binoka could also have picked up this usage from European sailors, many

of whom must have also had contacts with contemporary Sandalwood English. If *blong* did develop initially in Melanesia, this could have diffused to South Seas Jargon in Micronesia and elsewhere in the Pacific, though this would require revision to Clark's (1979-80:35) statement that the South Seas Jargon spoken in Polynesia and Micronesia shows little sign of development throughout its history.

A second possible interpretation is that Keesing (1988:22) may have been correct when he argues that prepositional *blong* was a very early South Seas Jargon feature rather than a later development. There is very little that allows us to decide between these arguments, however, so the stage at which the preposition *blong* evolved is still not clear.

(b) The transitive suffix *-im*

The quote from the Fijian speaker just noted in the 1840s also suggests the possibility that *-im* was being used as a transitive suffix in early South Seas Jargon. If this utterance is accepted at face value, the development of this feature would need to be brought forward by several decades. Clark (1979-80:31) suggests that this possibly represents a transcription error on Erskine's part, as he may have unintentionally attributed to the speaker features of pidgins that he was familiar with in Australia and elsewhere.

Keesing (1988:22), on the other hand, concludes on the basis of the same evidence that this feature was also present in early South Seas Jargon. He provides no other early examples of *V-im + NP* which would back up his point, though he does claim that King Binoka's speech also attests to the presence of *-im* as a transitive suffix in South Seas Jargon (Keesing 1988:46-47). There is plentiful evidence in King Binoka's speech that the third person singular object pronoun was *im*, possibly cliticised as *-im*:

I think I no got him⁴. [Stevenson 1900:294]

You give him. Mo' betta. [Stevenson 1900:341]

I likum mobetta [MacCallum 1934:268]

⁴The pronunciation here was probably *im*. This would be suggested by most English native-speaker models, and also by the fact that King Binoka's own language has no /h/ phoneme. Thus, English 'house' is repeatedly represented in King Binoka's speech as having no initial aspirate, e.g. "outch" [Stevenson 1900:299].

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However, these examples do not offer evidence of the use of *-im* as a transitive suffix in King Binoka's speech. In order to demonstrate this clearly, we would need to find examples of VP-*im* NP sequences. King Binoka consistently placed his objects directly after the verb with no intervening *-im*, e.g.

My patha tell me he see: you think he lie? [Stevenson 1900:334]

Everybody make medicine. [Stevenson 1900:335]

There is only a single example in his speech which possibly points to the reanalysis of the pronoun as a transitive suffix:

I take him all. [Stevenson 1988:294]

This example is ambiguous, however, as it is not clear whether the 'all' is meant to be a third person plural object pronoun, or whether the object is 'him' with a following quantity modifier. Another possible example comes from a commoner quoted by Stevenson's cook:

Him fella along hole plenny sick, catchem die. [MacCallum 1934:47]

As mentioned below, however, this recording is possibly suspect. No other sources point to the use of 'die' as a noun so perhaps MacCallum, whose book was published half a century after the events actually took place, could well have been influenced by his later experiences. Thus, Keesing's point again remains unproven.

(c) The predicate marker *i*

Clark (1979-80:30) expresses doubt about the existence of this feature in South Seas Jargon, and Mühlhäusler (1987) argues that this feature did not begin to develop until the late nineteenth century. In Crowley (1990:230-52), however, I argue that there is considerable evidence that the beginnings of this development were under way during the sandalwood era in southern Melanesia between the 1840s and the 1860s, where NP *i* VP sequences occur in 25% of all possible environments. King Binoka is also attested as having copies of *i* between a nominal subject and a predicate, e.g.

Miss Stlevens he good man, woman he good man, boy he good man; all good man My patha he go, my uncle

he go, my cutcheons he go, Miss Stlevens he go: all go.
[Stevenson 1900:345]

Of twenty subject plus predicate constructions in King Binoka's speech, he separates the subject and the predicate with *i* in thirteen instances, i.e. 65% of the time. This compares with my own count of contemporary Sandalwood English predicate constructions marked by *i* of 55%, which is roughly of the same order (Crowley 1990:243). Thus, even if early South Seas Jargon did not have a predicate marker, it appears to have developed later in Micronesia, again contradicting Clark's claim that South Seas Jargon did not change significantly outside the Melanesian area between the time of its initial establishment and its eventual decline.

There are some other features of later Pacific Pidgins present in King Binoka's speech which Clark did not refer to in his study. The use of *long* as a spatial preposition appears to be a later Melanesian development, with early South Seas Jargon spatial noun phrases being consistently marked by zero (Crowley 1990:196). King Binoka frequently also used zero to mark location and goal, so perhaps this is another feature that should be added to Clark's inventory of South Seas Jargon features:

I send him away ship⁵. [Stevenson 1900:299]

All go schooner. [Stevenson 1900:346]

In modern Bislama and Solomons Pijin, the adverbial *mobeta* 'preferably/ought' is used, e.g.

Mobeta yumi no go.

'We ought not to go.'

This does not occur in the corpus of South Seas Jargon material referred to by Clark, but it does occur frequently in King Binoka's speech in ways that are similar to, though not identical with modern usage in Melanesian Pidgins:

Tuppoti you mi'take, I 'peakee you. Mo' betta. [Stevenson 1900:296]

This suggests that perhaps *mobeta* should also be added to Clark's inventory of South Seas Jargon features.

⁵ From the context, it is clear that this means 'I sent him away on a ship'.

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Another interesting example involves what was destined to become the adjectival and pronominal suffix *-fala*. Clark (1979-80:40) regards this as a later Melanesian development, but Stevenson's cook records this from an Abemaman commoner as a pronominal suffix in a form that was not destined to survive into any variety of modern Melanesian Pidgin:

Him fella along hole plenny sick, catchem die. [MacCallum 1934, quoted in Keesing (1988:47) without page reference]

Keesing (1988:47) himself concedes that this could have been a recorder's error - and this source was published fifty years after the events that are being quoted - so even if *-fala* was present in the Central Pacific by the 1870s we need not assume that it was necessarily present in early South Seas Jargon. It too could have diffused later from Melanesian Pidgin to the Central Pacific.

Despite the suggestions that some features of later Melanesian Pidgins may have diffused to the Central Pacific, there are many well attested features of Melanesian Pidgins for which there is no evidence of their having spread. Thus, King Binoka did not use the interrogative *wanem* 'what', the pronominal quantifier *olgeta* 'all', Head + Modifier nominal constructions based on the *man-bus* pattern and the spatial preposition *long* (Clark 1979-80:40). If diffusion is to be invoked to account for the presence of later features in King Binoka's speech, this diffusion apparently operated selectively.

5 King Binoka's speech - jargon or pidgin?

The appearance of Keesing's (1988) book *Melanesian Pidgin and the Oceanic Substrate* has opened up a debate on the precise nature of what we have been referring to as 'South Seas Jargon'. While Clark (1979-80) proposes the cautious view that while we might expect this to have been structurally both highly restricted and highly variable, the documentary evidence is too restricted to allow us to decide conclusively whether this was indeed the case, or whether a somewhat more elaborated and stable lingua franca had emerged. Despite his caution on these grounds, he does come down in the end in favour of assuming a form of speech that lay somewhere between the non-structured interlanguage of learners and a restricted pidgin (Clark 1979-80:32). Mühlhäusler (1979:56-59), however, assigns this lingua franca unam-

biguously to what he refers to specifically as a 'jargon', a restricted and highly unsystematic form of communication. Keesing (1988:1325) argues that even before it penetrated into southern Melanesia and developed into Sandalwood English, 'South Seas English', especially as it was spoken in the Central Pacific, including Abemama, was structurally much more stable and elaborated than has so far been accepted.

It is only because the documentary evidence is so poor that this debate has been able to emerge. From what we have seen of the circumstances under which 'South Seas English' became established on Abemama, with local women satisfying the sexual needs of European sailors as part of an organised business, Keesing's (1988:21) argument of a creolising community seems plausible on a priori grounds. However, there is no clear indication that there were mixed-race children, or that any children that might have been born in these sorts of circumstances grew up with their fathers. After the restriction on trading by King Baiteke in 1851, contact between the local population and European sailors was severely restricted, and shipboard prostitution only involved short-term arrangements.

King Binoka's speech will unfortunately not definitively resolve the controversy about the nature of 'South Seas English' either. To do this, we would need to have similarly detailed observations on the speech of his father, King Baiteke (if in fact he spoke 'South Seas English'), or his father's trading masters and we do not have this. Alternatively, we would need to have clear evidence that King Binoka acquired his own knowledge as a young child.

One thing that we can probably assume is that early 'South Seas English', whether it was a pidgin or a jargon, would not have been more stable and elaborated than the speech of King Binoka, and that it could only have been as stable and elaborated, or less so. Thus, it is still of some importance to attempt to determine the precise nature of King Binoka's speech.

As we have seen, King Binoka's speech certainly exhibits a wide range of diagnostic South Seas Jargon structural and lexical features, as defined by Clark. There is some evidence, with respect to the behaviour of *tumas*, *blong* and *i*, and possibly some other features as well, that King Binoka's speech also included some features that probably represent later developments in Melanesia. However, there is no conclusive proof to indicate whether speakers in the Central Pacific in-

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herited these from an earlier elaborated and stable pidgin, or whether they had diffused later by means of shipboard contact with contemporary Sandalwood English. Thus, early South Seas Jargon could still have been structurally restricted, having become more expanded by the time that King Binoka learned to speak it, assuming that he learned it in the 1870s.

The other important factor to consider is that of structural stability. I have already referred to variability in the distribution of NP + VP and NP i VP constructions in King Binoka's speech. There is also variability in possessive constructions, with *blong mi* alternating with *mai* in the first person singular. Subject pronouns are sporadically dropped, e.g.

My chiefs no 'peak do what I talk. [Stevenson 1900:299]

Despite this evidence of structural variability in King Binoka's speech, however, the corpus is still too small to allow us to conclude that he was a speaker of an unstable jargon (or, indeed, an interlanguage) rather than a stable pidgin. A similarly small sample of the ordinary speech of any individual in any language would probably end up producing a very messy looking grammar. Most of the kinds of variability that we find in King Binoka's speech are also evident in documentary sources reflecting the speech of Melanesians, so this does not necessarily indicate that early 'South Seas Jargon' was any more unsystematic than other varieties of Pidgin in the Pacific. In any case, the 'queer' and 'personal' nature of King Binoka's speech, and his unusually large vocabulary, has already been referred to, and observations such as these may well indicate that King Binoka anglicised much more than his subjects, who may have spoken a more stable *lingua franca*.

Keesing (1988:25) argues that a 'relatively developed Pacific *lingua franca*' was introduced into southern Melanesia in the 1840s, and that the 'South Seas Jargon' widely referred to in the literature was structurally rather more complex and more stabilised than other scholars have allowed in the past. His contention cannot be proven or disproven, however, in the absence of substantial documentary evidence. King Binoka's corpus comes nearest to being substantial enough. While his reported utterances do suggest that there may have been a degree of grammatical evolution in South Seas Jargon during its lifespan over and above what has been accepted by others, the proposition that early

South Seas Jargon was structurally relatively developed still remains unproven as King Binoka's speech most probably dates from three decades later than the crucial formative years of the lingua franca.

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'Woman's constancy'¹: a distinctive zero plural in New Zealand English

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1. Introduction

A specific feature of some New Zealanders' speech which has become particularly noticeable in the last twenty or thirty years is the pronunciation of the plural noun *women* identically with the singular *woman*. By this change the word is transferred from one group of irregular nouns, the mutation plurals (though *woman* is an idiosyncratic item even within that set; see 2.1 below), into another irregular group, the zero plurals (though the typical zero plural, such as *sheep*, has the same written as well as spoken form²).

A striking and very public example of this new zero plural occurred a few years ago in Television New Zealand's advertisements for a record titled *Women in Rock*, a compilation of tracks by a number of different women rock performers. The title was read by the (male) voiceover speaker with the singular pronunciation clearly heard for the plural form (the pronunciation could have represented *Woman in Rock*, but

¹With apologies to John Donne.

²In fact the identical pronunciation of singular and plural of *woman* in NZE is now also being reflected in the written form. I have found instances of the plural spelt <woman> in a range of written texts including a newspaper theatre review, a computer-printed student fees form (a course on 'Women in American society' entered as 'Woman in America'), and not a few examination scripts. Teachers I have spoken to confirm <woman> for <women> as an increasingly common (mis)spelling in their pupils' work. Other NZE 'pronunciation spellings' being encountered in examination scripts include <knowen> and <showen> (cf. Bayard 1989: 53).

The forms *men's* and *woman's* are sometimes linked by coordination in NZE in both speech and writing. A *woman's jersey* is standard usage in itself, but a sentence like 'you can knit either a dress, a woman's or men's jersey' (from a pattern produced by Crucci Wools Ltd, Upper Hutt) reflects a zero plural pronunciation of *women*.

the spelling on screen showed that the generic sense of the singular did not apply).

It is difficult to say when this pronunciation change first surfaced in New Zealand English (NZE). It does not appear to be mentioned in any books or articles about NZE before the 1970s (for example in Arnold Wall's prescriptive texts or in Turner 1966). Its omission from the extensive list of alleged errors in New Zealand pronunciation in Wall (1939:16-21) is especially significant. Nor is *woman/women* listed in any of the in-house guides to on-air pronunciation compiled by the National Broadcasting Service (in the 1930s) and by the New Zealand Broadcasting Corporation (in 1961 and 1969). Singular and plural forms are, however, included (with RP pronunciations indicated) in a revised version of the NZBC guides, issued by Radio New Zealand in 1982, implying that the zero plural had begun to infiltrate broadcasting usage for the first time in the 1970s.

The earliest reference I have found to the matter in the correspondence columns of the *New Zealand Listener* (complaints voiced there being an excellent guide to language trends) is in a letter dated October 1963. It has been a fairly regular subject for comment in letters and other pieces in the *Listener* since then³. Bayard (1985:8) reports one of his informants having had the zero plural pronunciation of *woman* 'drummed out of him in secondary school (with only partial success) in the late 1950s'. One may conclude that the widespread use of this pronunciation is a post- rather than pre-World War 2 development⁴.

Bayard (1987:9) estimates the present-day use of this zero plural in

³ Complaints about the zero plural of *woman* are found in the following issues of the *New Zealand Listener*: 4th October 1963, p.9; 22nd December 1967, p.11; 6th July 1970, pp.43-44; 8th November 1971, pp.13-14; 3rd May 1975, p.8; 28th August 1976, p.12; 31st March 1979, p.11; 16th August 1980, p.70; 22nd September 1984, p.11; 6th September 1986, p.8; 18th October 1986, p.8; 8th November 1986, p.8. A letter from Donn Bayard in the issue of 13th December 1986, p.8, takes a non-prescriptive view.

⁴ Sporadic occurrence of the zero plural earlier in the century cannot of course be ruled out. Indeed a 1911 Marlborough school inspector's report, cited in Gordon 1983:36, includes among a list of observed errors in pronunciation 'woomen' (sic) for 'women', which may perhaps be an attempt to transcribe a zero plural pronunciation. Other earlier references to this pronunciation feature may remain to be found. It may be noted that if the view taken in this paper is correct, that the zero plural of *woman* is chiefly attributable to centralisation of /I/ in NZE, then that precondition for the pronunciation change has existed since at least the beginning of the 20th century (Gordon and Deverson 1985:23-24).

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everyday speech 'at about the 80% level among NZE speakers under 40', though my own impression is that this estimate may be on the generous side. The pronunciation does not appear to be shared with Australian English (or indeed with any other regional variety of the language).

A number of different explanations for this pronunciation feature have been proposed, some from a prescriptive and moralistic viewpoint, others from a linguistic viewpoint. These explanations are reviewed in section 3 below, following a brief account of the standard form of *woman* and its historical development in section 2.

2. The standard form

2.1 Pronunciation and spelling

In standard English usage both pronunciation and spelling of the mutation plural noun *woman/women* are highly idiosyncratic. No other English noun has a contrast of /ʊ/ and /ɪ/ in its singular and plural forms. Further, the phonologically contrastive first syllables of *woman* and *women* are represented by means of the same spelling. There is homography here not of separate word items (as in, say, *wind* 'current of air' and *wind* 'to coil'), but in one syllable of morphological variants of the same word. The only other case of homographic representation of contrastive singular and plural vowels among the English nouns is the equally irregular *child/children*.

The plural *women*, moreover, is the only word in English in which /ɪ/ in a stressed syllable is represented in the written form by <o>. This anomalous spelling of /ɪ/ was exploited by George Bernard Shaw in his well-known facetious respelling of *fish* as <ghoti> (<gh> as in *rough*, <o> as in *women*, <ti> as in *nation*). <ghoti> is in fact entirely implausible as a spelling of *fish*, but *woman/women* (like the *-ough* words) certainly illustrates in extreme fashion the lack of correspondence between spelling and pronunciation for which English is notorious (though it is often overstated).

2.2 History

Woman/women has a complex history underlying its present idiosyn-

crazy⁵. It began life in Old English as the grammatically masculine compound word *wif-man(n)* [wi:fman] 'female person'. The compound is not paralleled in any other Germanic language. The [f] was gradually lost during late Old English and early Middle English by the assimilation of [fm] to [mm] and later [m].

Singular and plural of this word were thus differentiated in speech at first through the vowel of the second syllable ([wi:fman], [wi:fmen]), and only later through the vowel of the first syllable. Forms with the original [i:] shortened to [i] in singular and plural occur until the 15th century, giving spellings such as *wimman/wimmen*. In some dialects of early Middle English, however, the [i] was rounded to [u] under the influence of the initial bilabial [w]. This change is reflected in spellings of singular and plural with <u> and with <o>, the latter a scribal device to assist legibility in handwritten texts where <w>, <m>, <n>, and <u> could be hard to decipher when used together; cf. *won, come, month* etc. Hence *wuman/wumen, woman/women*, again with no difference in pronunciation in the first syllables of singular and plural.

Eventually these two lines of development merged, and in the 15th and 16th centuries [u] became standard in the singular *woman* and [i] became standard in the plural *women*. This distinction was probably due less to chance than to a concern to maintain a contrast of pronunciation which was disappearing with the gradual weakening of the second syllable as the word ceased to be perceived as a compound. Thus the mutation of *-man/-men* was as it were back-shifted into the first, stressed syllable, perhaps with some influence from common mutated pairs such as *foot/feet, goose/geese*, to which *woman/women* is now roughly similar (close back vowel in singular, close front vowel in plural).

At the same time the spelling with <o> had become standardised for both singular and plural pronunciations, and was not altered to reflect their divergence (any more than many other phonological changes were accompanied by corresponding alterations to spelling). Hence in spelling singular and plural of *woman* continue to be differentiated, as they have been since Old English, through the second syllable; while in pronunciation they are now, unlike in Old and Middle English, differentiated chiefly through the first syllable.

⁵ See more fully OED 1989, s.v. *women* (Vol. XX, pp. 484-488).

3. The New Zealand zero plural

3.1 The Prescriptive View

The zero plural of *woman* has attracted much adverse comment in the media and elsewhere, for example in newspaper columns and (as noted earlier) in editorial correspondence. It has predictably drawn fire from those concerned with declining language standards, those who see English as under threat from the bad habits of its users. It cannot be that zero plurals are inherently objectionable, since expressions such as *many salmon* and *six hundred* are never criticised. However, given that the New Zealand variety of English in general has encountered more disparagement than acceptance from authorities and self-appointed language-guardians, it is inevitable that a pronunciation failing to observe an established British English distinction between a plural and a singular form will confirm many people's worst fears about New Zealand speech and be roundly condemned as a mark of 'illiteracy'.

These comments by a newspaper columnist on language matters typify the conservative response to this pronunciation feature:

I have long ago accepted the fact that the average New Zealander either doesn't know there is a difference between *woman* and *women*, or is too lazy to make it.

I shuddered recently to hear an otherwise well-spoken young woman on radio speak of a retreat for battered women. But according to her the organisation was set up for the benefit of one woman only.

Never once did she say "wimm'n"⁶.

It is a standard prescriptive response to linguistic change to attribute it to ignorance and/or laziness. Ignorance on the one hand seems an improbable explanation here. Possibly some of those who make no distinction between the singular and plural of *woman* are not aware that others do make one, but it is more likely that most know of the two alternatives, regarding them in the same way as they do alternatives for words such as *maroon* and *basic* (to take other NZE examples) or words such as *data* and *finance* (to take other general

⁶Extracted from Bruce Scott's weekly column *Take My Word*, Christchurch Star, 17th January 1984.

English examples). Their habit is to pronounce *women* as /wʊmən/ just as it is the habit of others to pronounce *maroon* as /mərəʊn/. What they may be unaware of, however, is the greater social stigma attaching to the former than to the latter.

The charge of laziness is equally unsound and simplistic. It also implies a more damaging moral judgement on those whose speech is under attack. Ignorance may be excusable, but laziness suggests a more wilful fault, a deliberate lack of effort in preserving an established linguistic contrast. A factor linguists prefer to call economy of effort is often present in pronunciation and pronunciation change. It seems to be a universal tendency in language, however, not confined to particular social or regional accents, and emotive description of this tendency as laziness is inappropriate. But however this tendency is described it is evidently not significant in the present case. If economy of effort were involved we might expect to find speakers not differentiating plural from singular in other nouns as well. But the change is affecting just the one word. It is noteworthy that the journalist above admits to hearing the zero plural from 'an otherwise well-spoken young woman'. There is no suggestion that it is part of a general slovenliness of language on her part at least.

Interpretation of this new pronunciation as the product of some human or moral failing (from which those who conform and complain are happily exempt) must be rejected as impressionistic and unenlightening. A disinterested linguistic approach to the phenomenon will provide more satisfactory results.

3.2 The spelling pronunciation hypothesis

Discrepancies between spelling and pronunciation such as in *woman* /*women* might be resolved in one of two ways. First, the spelling might be changed to match the pronunciation. Before English spelling became relatively fixed it was usual for spelling to reflect pronunciation fairly closely and to be updated as pronunciation changes made it necessary (Pyles and Algeo 1982:62). But in recent times changes to established spelling have been rare and any alteration to *woman/women* is virtually unthinkable. A child may write <wimin> for the plural of the word but this ironically must be corrected to something that is phonetically less accurate. Radical feminists in recent years have used

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spellings such as <wimmin> and <womin> in an attempt to repudiate the etymological link with *man/men*, but these pose no threat to the standard orthography. Spelling reform, whether linguistically or politically motivated, makes no headway in the face of conservatism, respect for the printed standard and the perceived advantages of a stable and uniform system for English world-wide (with only minor variations). Better the devil you know...

The first option therefore seems closed, in the present case as in others. The alternative, which is more viable, is to change the pronunciation to match the spelling. Speech is not as fixed as writing, and if writing cannot be made to conform to speech, speech may well be made to conform to writing. This more recent trend has been responsible for 'spelling pronunciations', which have become especially common in the 20th century. Well-known examples where pronunciation has been modified under the influence of the written form include *waistcoat*, *forehead*, *often*, *grindstone*, and place-names such as *Shrewsbury*. These words are now mostly spoken as they are written, that is without elisions, weak syllables etc., so restoring the correspondence between spelling and pronunciation ('phonetic spelling') which had been obscured by historical sound-changes. Long and unfamiliar words encountered first or chiefly in writing are now very likely to be given a spelling pronunciation.

Spelling pronunciations are increasingly common in all varieties of English, but they have been noted as particularly characteristic of Australian English (AusE) and of NZE. (Mitchell and Delbridge 1965: 50-52; Bauer 1986:252-253). For example, in many words unstressed syllables with /ə/ or /ɪ/ in British English have full vowels in AusE and NZE: compare RP /ɪŋkəm/, /pɒtrɪt/, /vəkeɪfən/, /mæɪrəθən/ and NZE /ɪŋkəm/, /pɒtreɪt/, /veikeɪfən/, /mæɪrəθɒn/. The influence of the written form is also seen in Australian and New Zealand pronunciations of words such as *extraordinary*, *interesting*, *medicine*, without any elision of unstressed vowels.

Two previous linguistic discussions of the origin of the zero plural of *woman* both interpret it as a spelling pronunciation. In the now discontinued *Listener* Language column Ian Gordon argued that some New Zealanders 'have abandoned the standard pronunciation (of *women*) in favour of one based on the look of the word in print'⁷. And

⁷ *New Zealand Listener*, 11th August 1984, p.53.

in the course of his discussion of the social distribution of the zero plural of *woman* Donn Bayard accepted Gordon's explanation as 'a convincing one' (1985:8).

This is certainly not a spelling pronunciation of the usual kind, however. Spelling is not made markedly more phonetic by the pronunciation change, since /ʊ/ spelt <o> is almost as rare as /ɪ/ spelt <o>, nor does the pronunciation restore full vowel quality in the unstressed syllable. Ian Gordon cites the word *forehead* as a parallel to the zero plural pronunciation of *women*, but the spelling pronunciation in the former is motivated by the multiple analogy of the two morphemes *fore* and *head*, which are in frequent use both as discreet word items and as constituents of many compounds (*foretaste*, *skinhead*, etc.). If the written form is a factor in the development of a zero plural of *woman* a single analogy only is operating, that of the word's singular form. The change to an invariant plural here resolves the inconsistency of pronouncing the same letter differently in grammatical forms of the same word. Interestingly, the regularity the word *woman* displayed before the 15th century, when the first syllable had the same pronunciation in both singular and plural, is reintroduced in NZE.

The influence of spelling cannot be discounted as a contributing factor in the development of an identical pronunciation for *woman* and *women*. The written form may indeed suggest that the same pronunciation is required for the stressed syllable in both forms. However, it is unlikely that this is in itself a sufficient explanation of the new plural pronunciation. It is doubtful if change of vowel quality in the stressed syllable of a core vocabulary item of high frequency could be effected by the influence of spelling alone. Since the change appears to be confined to NZE speakers, it is natural to consider the possibility that the change is phonologically motivated, by characteristics of the NZE accent, rather than, or at least as well as, orthographically motivated.

3.3 Effects of the NZE accent

In NZE the substitution of /wʊmən/ for /wɪmɪn/ is a less radical change than it would be in RP, for example. The reason for this is the centralisation of /ɪ/ which is recognised as a distinctive characteristic of the general NZE accent. Bauer (1986:236) describes /ɪ/ in stressed

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positions as 'very central and open in comparison with other varieties of English', and Trudgill and Hannah (1982:19) refer to the phoneme in NZE as 'a central vowel in the region of [ɜ ~ ə]'. In a broad NZE accent /ɪ/ may be sufficiently open to overlap with /ʌ/, a pronunciation conveyed in spellings such as *fush* 'n *chups* and satirised in Arnold Wall's 'duty' on 'Phullus and Phullup' (1964:138-139).

Conversely, Bauer (1986:239, and see also 233) also refers to a 'degree of centralisation' in NZE /ʊ/. In the accents of most New Zealanders, then, there is a centralising tendency in two directions which brings /ɪ/ and /ʊ/ much closer together than they are for an RP speaker. Thus, even for those NZE speakers who continue to contrast *woman* and *women*, there will normally be less articulatory distance between the stressed vowels of the two forms than there is for the British English speaker.

Coupled with this is the regular NZE (and in this case AusE) centralisation by which RP /ɪ/ is replaced by NZE /ə/ in unstressed syllables such as the second syllable of *women*. We may compare for example RP /wɪkɪnz/, /fəʊldɪd/, /tæksɪz/ and NZE /wɪknəs/, /fəʊldəd/, /tæksəs/ (*taxes*). Hence RP /wɪmɪn/ (so *OED* 1989), but NZE /wɪmən/ (so *Penguin Tasman Dictionary* 1986)⁸. Thus, if the singular and plural of *woman* are distinct for NZE speakers, it is normally only in the first syllable, not as in RP in the second as well. With centralisation in both syllables, the resultant pronunciation of *women* is [wɪmən] or [wəmən], which are not far removed from the pronunciation of the singular, especially where a centralised variant of /ʊ/ is found in the latter.

It may be argued, then, that any tendency towards identical pronunciation of *woman* and *women* is encouraged by general features of New Zealanders' speech which blur the distinction anyway and make it less perceptible to hearers. If you hear little contrast, you may make little yourself, and eventually none at all. This process is now complete for a good number of NZE speakers. That the change in the accented syllable of *women* is not found in AusE may be explained by the sharper distinction maintained in that accent between /ɪ/ and /ʊ/; in AusE /ɪ/ is typically closer and more forward than in RP (Mitchell

⁸ Trudgill and Hannah give the following transcriptions of the analogous form *Philip*: RP [fɪlɪp], AusE [fɪləp], NZE [fələp]. 'For very many New Zealanders there is thus no contrast between /ɪ/ and /ə/.' (1982:19).

and Delbridge 1965:34-35), giving for example what is caricatured as 'feesh' rather than NZE 'fush'.

Before accepting Ian Gordon's explanation of the zero plural of *woman* as a spelling pronunciation, Bayard (1985:8) does consider the possibility that the pronunciation may have developed 'as a by-product of /I/ centralisation'. The possibility is rejected, however, on the grounds that backing of /I/ to /U/ seems to occur in NZE only before a following /l/, so [mʌlk], [ʃʊldrən]; and because it is not found in other forms in which there is a preceding labial (*swʊm/ for *swim* e.g.). However, this seems to overlook the influence of the singular pronunciation of *woman* on the plural. The present specific case involves the interaction of pronunciations in two forms, rather than any combinative change in just one. Phonetic contrast between singular and plural of *woman* has been lessened in NZE to the point where merger of the two is a natural and predictable consequence.

It is significant that some of the prescriptive complaints about *women* have referred to the near identity rather than the complete identity of singular and plural pronunciations⁹. This seems to suggest that the change from clearly distinct to fully identical pronunciations has occurred in gradual stages in NZE rather than in the single shift implied by the spelling pronunciation argument.

3.4 Reinforcing factors

A number of constructions occur in which the singular *woman* has an implicit plural reference; these may be contributing to the growing adoption of the unchanged plural pronunciation in NZE.

For example, singular forms such as *woman* may occur in English after numerals and the quantifier *all* in NPs (sometimes hyphenated in the written form) functioning as embedded premodifiers in larger NPs. For example, one can have a *two(-)horse race* or a *ten(-)point programme*, and an *all(-)woman crew* or a *four(-)woman committee*, and so on. Such constructions probably had no bearing on the original pronunciation change, but they may have assisted and still be assisting in consolidating the zero plural in NZE. It may be hard to convince

⁹For example Eric Bradwell in the *Listener*, 18th October 1986, p.8, refers to 'that perennial horror, the plural of *woman* pronounced in a similar manner to the singular of the word' (my italics).

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someone with the zero plural pronunciation that while, say, *all woman crew* is grammatically sound, *all 'woman' cry* is 'incorrect'. Forms such as the former may seem to provide a model for and to legitimise those such as the latter.

More significant in the spread of this change among NZE speakers may be expressions in which the generic singular *woman* is used, for example *woman's intuition*, *woman's role in society*. In speech such phrases are easily taken to have implied plural reference, perhaps leading to the use of /wʊmən/ as plural in other contexts by analogy.

A specific case of potential confusion between singular and plural reference occurs in the name of the mass-circulation magazine *The New Zealand Woman's Weekly* (compare *The Australian Women's Weekly*; it is often difficult to remember which country's magazine contains the plural form!). The NZWW is a magazine (obviously) for New Zealand women, and the title when spoken may well be misinterpreted as incorporating the plural form. The presence of such ambiguity in the name of a New Zealand 'institution' with a high public profile over many decades may be no small factor in reinforcing the new zero plural pronunciation.

4. Conclusion

Of the two linguistic explanations of the zero plural of *woman* discussed above, /I/ (and /U/) centralisation in NZE seems to me the more likely candidate for the primary cause of the change than spelling pronunciation, though spelling and usage of the word do need to be considered as associated factors in the establishment of the invariant plural among a good proportion of general NZE speakers. Attributing the change to characteristics of the NZE accent has the major virtue of explaining why the zero plural has developed in New Zealand and apparently nowhere else to date. If it were purely an example of spelling pronunciation, its appearance as well in AusE at least, and perhaps elsewhere too, might have been expected.

The debate in New Zealand on the merits or otherwise of this new zero plural will no doubt continue. Prescriptivists are unlikely to accept the linguist's non-censorious account of the feature, as they are less than well disposed in the first place towards the features of the

NZE accent that have been responsible for the change¹⁰.

A conservative argument against the constant *woman* that is linguistic rather than moralistic is that the loss of distinction between the singular and plural in speech is a potential cause of miscommunication. A similar argument is sometimes voiced in the case of the merging of the centring diphthongs /iə/ and /eə/ in general New Zealand speech. But misunderstandings as a result of homophones and homographs of longer standing in English are few in practice. Ambiguity is more evident in language out of context than in it. Communication in a language that already tolerates groups such as *pore*, *paw*, *poor* and *pour* is unlikely to be seriously threatened by the addition of one more word with an unchanged plural pronunciation. A refuge for battered /wʊmən/ (cf. 3.1 above) will not be understood, except by the perverse, to mean a refuge for one woman only.

There need be no concern in conservative ranks that the new pronunciation of *women* will provide a model for the same changes in other words of similar form. *Woman/women* is a unique case, providing the only grammatical contrast in the language that was at risk to the change that has occurred. There is no prospect of analogous change in words such as *Philip* and *cricket* (i.e. to */fʊləp/ and */krʊkət/), because no comparable grammatical variants of those words exist to exert influence on their pronunciation as the spoken form of *woman* has on that of *women*.

It is clear that despite strong disapproval in some quarters the zero plural of *woman* is here to stay in NZE. The journalist quoted earlier admits as much in his first sentence. Whether it is yet the pronunciation of 'the average New Zealander' might be disputed. However, where it is heard from 'well-spoken' young women and men on radio and television, it may be necessary to revise assessment of it as a incorrect and uneducated form. Only time will tell whether this pronunciation variant will make further inroads still into general and even cultivated New Zealand speech¹¹.

¹⁰ Another *Listener* correspondent, C.E. Thatcher (22nd September 1984), attributes the zero plural to 'an inability to pronounce the short "y"', thus spotting the influence of the NZE accent while claiming 'It's easy to correct'.

¹¹ The first lexicographical recognition of the zero plural pronunciation came in the revised edition of the *Heinemann New Zealand Dictionary* (1989:1330).

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Greek word order: three descriptive models

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The purpose of this paper is to examine two aspects of word order in main clauses in the Greek of Herodotos (a Greek historian of the fifth century BC, who wrote in the Ionic dialect).

1. The first step will be to take a head/modifier count to see whether the various elements of the main clause precede or follow their head (the verb)¹.
2. The second step will be to take a selection of modifiers in pairs to see whether the various modifying elements are ordered in relation to each other.

Studies 1. and 2. will be controlled by means of statistical tests: the binomial² and the chi square³ (written X^2). These tests will be used to evaluate a random hypothesis, i.e. the hypothesis that in 1. the modifiers are not ordered in relation to their heads and in 2. the modifiers are not ordered in relation to each other .

In practice the statistical tests will be used to calculate in each

¹Much of the published work on Greek word order is devoted to counting the number of elements before and after the verb. See e.g. Delbrück 1911, Frisk 1933 and Dover 1960. These authors use raw figures and percentages without applying statistical tests.

²The binomial statistic is based on the analogy of tossing a coin. For each toss there are two possible outcomes (heads and tails). If the coin is not biased, any trial should show about the same number of heads as tails. For the purpose of this paper, the binary data in the sample (the observed values) are compared with the values to be expected if the data are random (comparable with the tossing of an unbiased coin). In each test, the value of the binomial is looked up in a set of tables to find the probability that the result is random.

³The chi square (X^2) is a measure of difference. It is used here to compare two sets of numbers, i.e. the pairs of observations in the sample with the values predicted by the null hypothesis. As the value of X^2 increases the probability of the null hypothesis decreases. The probability of any given value of X^2 can be found in the appropriate statistical tables.

instance the probability⁴ that the null (random) hypothesis is valid. If the probability is very low, i.e. 0.05 or lower, the null hypothesis will be abandoned and replaced by the claim that the elements are ordered as indicated by the counts and percentages in Table I.

For study 1. the figures are displayed in Table I⁵. Here the order of each modifier in relation to its head is shown by the numbers and percentages. The associated probabilities indicate whether the results are significant. An inspection of the table shows that six modifiers, namely T, C, G, S, O⁶ and Io are preposed; four, namely Al, I, F, and Nc are postposed and one namely Ab⁷ is random. So there is a mixture of order and randomness in the model.

The data for stage 2. are presented in Table II. These data will be used to test the claim that the relative order of paired modifiers can be predicted by their percentage frequency before or after the verb as seen in Table I. To be more precise it is possible to assign to each modifier studied a positive or negative index. For example, element T has an index of [-96.85] and C has an index of [-86.11]. The theory predicts that T should precede C. Likewise I has an index of [+88.77] and F has an index of [+93.33]. F should therefore appear after I. This theory, the theory of polarities, was originally developed in Dunn (1981).

In Table II the pairs of modifiers in the left hand column are placed

⁴The probability P of any given result is represented by a decimal fraction between zero and one, where one = certainty.

⁵The list in Table I opens with subordinate clauses (T&C), which are followed by the absolute participle (G). Next come the NPs (S, O and Io); then the prepositional phrases (Ab and Al); then the infinitive (I), and finally the clauses F and Nc. This order compares favourably with Simon Dik's theory of LIPOC (language independent preferred order of constituents as stated in Dik 1980:23 and 1981:192-193).

For an account of head modifier behaviour in the Indo-European languages see Hawkins 1983; also Friedrich 1975.

⁶Participles in Greek adopt the position of the corresponding subordinate clauses. In word order research little attention has been paid to the Greek participles. The fullest account of the Greek subordinate clauses can be found in Montell 1963. For the infinitive see Burguière 1960.

⁷Since inflected (full) words in ancient Greek are mobile (Dover 1960), the number of possible orders for n inflected words is n!. This means that in a sentence of 10 words the number of possible orders is over three million. No author needs this amount of freedom, and it is not surprising that randomness plays a substantial part in the ordering of words in the Greek sentence. It is probable that ancient Greek has freer word order than any other natural language.

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in the order predicted by the theory of polarities. The outcome of the tests shows which modifier pairs follow the polarity theory (this result requires a probability of 0.05 or less), which are random (this result requires a higher probability), and which are evidence against the theory (this result requires a low probability and contradictory percentages).

A glance at Table II shows that there are six random sequences: T+G, T+S, C+S, O+Ab, O+Al and S+Io. The remaining pairs all support the model. In fact there is no evidence against it. So the theory is sustained by the data - always with the proviso that there is a random factor involved.

The last model to be tested is relatively simple. This model claims that modifiers of the verb fall into three classes:

- [i] Initial elements namely : G, T, C.
- [ii] Medial elements namely : S, O, Io.
- [iii] Final elements namely : I, F, Al, Ab, Nc.

In general Initial elements precede Medial elements and Medial elements precede Final elements.

It will be noticed in Table II that there are no counterexamples to our third descriptive model. The random interference in the groups T+G, T+S, C+S, O+Ab O+Al and S+Io has already been noticed. It must also be admitted that this model does not predict the relative order of two elements which are both initial, both medial or both final. For that purpose it is necessary to have recourse to the theory of polarities. Each of the models tested has produced similar results. It is important also to note that the two statistical methods have been consistent and are both appropriate for the task for which they have been used.

In closing this argument it is necessary to emphasize the great flexibility of word order in Ancient Greek, where almost anything is possible. In explaining sequences of words in actual text two factors must be kept in mind:

- [i] style (author's choice);
- [ii] random variation.

It is often difficult to decide between [i] and [ii]. Often an example appears to be influenced by several factors at once. To illustrate

the considerations involved selected sentences have been taken from Herodotos I. The sentences chosen all exhibit subject movement (the subjects are underlined). The examples, with translation and explanation follow in Appendix I.

Appendix I: Subject Movement

- 35, 1. ekhontos de hoi en khersi tou paidos ton gamon,
 apikneetai es tas Sardi:s
 ane:r sumphore:i ekhomenos kai ou katharos kheiras.

'His son's marriage was in hand when a man arrived at Sardis, who was suffering misfortune and had unclean hands.'

1. The initial position has been taken by the absolute construction (*ekhontos...ton gamon*).
2. The subject is expanded and rather long. So it suits a position at the end of the sentence.

- 81, -. toisi men de: kateste:kee poliorkie:

'Those men were under siege.'

1. The demonstrative *Ho* normally appears at the front of the sentence.
2. Here *toisi* (from *Ho*) is the semantic subject. Cf. *poliorkie:* which is the grammatical subject, but, being a verbal noun, is the semantic predicate.

- 85, 3. ...e:ie gar to:n tis Perseo:n allogno:sas Kroison
 ho:s apokteneo:n...

'for one of the Persians was going to kill Kroisos whom he had not recognised.'

1. The verb tends to come first in *gar* clauses.
2. The verb *e:ie* is relatively weak and forms a periphrasis with the participle *apokteneo:n*.

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112, 2. *tetoka gar kai ego;*, *tetoka de tethneos.*

'For I too have given birth, but I have given birth to a dead child.'

1. The emphasis has been put on the repeated initial verb *tetoka*. The position of choice for this figure (anaphora) is the front of the clause.

2. The sentence is emotional. Hence the inversion of subject and verb.

120, 4. *ameibetai ho Astyages toiside.*

'Astyages replies with these words.'

1. Verbs of saying often open the sentence. Cf. the English *Quoth he, said she* etc.

2. The subject *Astyages* is expected in context and can thus be postponed.

131, 3. *kaleousi de Assurioi te:n Aphrodite:n Mulitta, Arabioi de Alilat, Persai de Mitran.*

'The Assyrians call Aphrodite Mylitta, the Arabs call her Alilat, and the Persians call her Mitra.'

1. The verb *kaleousi* goes with three subjects. It is natural to place it first as the more general element.

2. In Greek gapping to the right is preferred to gapping to the left.

180, 1. *exiei de houtos es te:n Eruthre:n thalassan.*

'This (river) flows into the Red Sea.'

1. Geographic verbs are often placed first in descriptive passages.

2. Cf. the preceding sentence with long subject:

180, 1. *rheei de ex Armenio:n eo:n megas*
etc

'It flows out of Armenia, being large etc.'

MOD	PRE	POST	TOTAL	X ²	P	BIN	P
T	154(96.85%)	5(3.15%)	159	139.63	0.001	11.739	0.001
C	31(86.11%)	5(13.89%)	36	18.78	0.001	4.167	0.001
G	98(84.49%)	18(15.51%)	116	55.17	0.001	7.335	0.001
S	651(75.26%)	214(24.74%)	865	220.77	0.001	14.824	0.001
O	470(53.47%)	409(46.53%)	879	4.23	0.050	2.024	0.022
Io	109(64.50%)	60(35.50%)	169	14.21	0.001	3.692	0.001
Ab	26(52%)	24(48%)	50	0.08	0.500	0.141	0.444
Al	53(28.65%)	132(71.35%)	185	33.74	0.001	5.735	0.001
I	31(11.23%)	245(88.77%)	276	165.93	0.001	12.821	0.001
F	1(6.67%)	14(93.33%)	15	11.27	0.001	3.098	0.001
Nc	1(4.17%)	23(95.83%)	24	20.17	0.001	4.287	0.001

T=temporal clause C=conditional clause G=genitive absolute
 S=subject O=direct object Io=indirect object
 Ab=ablative phrase Al=allative phrase I=infinitive
 F=final clause Nc=noun clause object

Table I: Modifiers of verbs

ORDER FOR	AGAINST	TOTAL	X ²	P	BIN	P
T+G	6	14	0.29	0.700	0.267	0.390
G+S	57	77	17.78	0.001	4.103	0.001
G+O	42	48	27.00	0.001	5.052	0.001
G+Al	18	21	10.71	0.010	3.055	0.001
G+I	20	23	12.57	0.001	3.336	0.001
T+S	39	85	0.58	0.500	0.651	0.260
T+O	86	93	67.11	0.001	8.088	0.001
T+Al	34	34	34.00	0.001	5.659	0.001
T+I	21	21	21.00	0.001	4.364	0.001
C+S	10	14	2.57	0.200	1.336	0.090
C+O	18	20	12.80	0.001	3.354	0.001
S+O	323	469	66.80	0.001	8.127	0.001
S+Ab	24	33	6.82	0.010	2.437	0.008
S+Al	90	111	42.89	0.001	6.454	0.001
S+I	117	123	100.17	0.001	9.918	0.001
S+Nc	13	14	10.29	0.010	2.940	0.002
O+Ab	14	21	2.33	0.200	1.309	0.097
O+Al	38	72	0.22	0.700	0.354	0.360
O+I	23	24	20.17	0.001	4.287	0.001
T+Io	11	12	8.33	0.010	2.598	0.005
C+Io	9	10	6.40	0.020	2.214	0.014
S+Io	70	144	0.11	0.800	0.250	0.400
Io+O	59	90	8.71	0.010	2.846	0.002
Io+I	29	30	26.13	0.001	4.930	0.001
O+F	12	13	9.31	0.010	2.774	0.003

Table II: Order of modifier pairs

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A note on the glottal fricative in Maori¹.

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Introduction.

Hohepa (1967:5-8) states that the Maori fricative represented orthographically as *h* may be realised as a glottal, velar or palatal fricative: 'The fricatives have two linear distinctions, bilabial through dental /f/, and a palatal through glottal /h/. .. /h/ is regarded as a consonant on phonological grounds; its allophones range from a velar to a palatal fricative'. A similar claim is made by Biggs (1978:706) who writes: 'Tokelauan, a non-Eastern Polynesian Nuclear language has [hy] before non-front vowels, which was also true of the now extinct Moori language of the Chatham Islands, and of New Zealand Maori in the 18th century. By the early 19th century Maori [hy] from *s had become [h] everywhere except in the far north of the North Island. It has now become [h] everywhere.'

In this paper I shall present evidence that the velar/palatal fricative, bearing the feature [+high], in alternation with /t/ is the underlying reflex of English /s, z, ʃ, ʒ/ in borrowed vocabulary, and is the source of the feature [+high] spread to epenthetic /i/: it is the underlying form of Maori /h/.

Borrowing processes.

The assimilation of English words into Maori requires the elimination of closed syllables, by vowel epenthesis and consonant deletion. Epenthetic vowels acquire feature specifications either by variable default assignment or by the spreading of features from neighbouring seg-

¹I wish to thank Noam Chomsky, Michael Kenstowicz and Donca Steriade for helpful discussion of this paper; any howlers are of course all my own work.

ments, either vowels or consonants. A few examples are given below².

(1) a. (by apparent default)

thread	t <u>a</u> rete	coat	ko <u>t</u> i
October	o <u>k</u> etopa	map	ma <u>p</u> i
John	ho <u>n</u> e	coffin	ka <u>a</u> fena
doll	ta <u>a</u> re	mile	maa <u>e</u> ro

b. (spreading from a vowel in the preceding syllable)

Auckland	aa <u>k</u> arana	cent	he <u>n</u> eti
wolf	wu <u>r</u> uhi	apostle	aa <u>p</u> oto <u>r</u> o
ink	iu <u>k</u> i		

c. (spreading from a vowel in the following syllable)

blanket	pa <u>r</u> aikete	slate	te <u>r</u> eti
priest	pi <u>r</u> iti, pi <u>r</u> ihi	cloth	ko <u>r</u> oihe
blue	pu <u>r</u> uu		

d. (spreading from a consonant)

umpire	am <u>p</u> aea	purple	pa <u>p</u> ura
plate	pu <u>r</u> eti		
	(also pereti)		

Variable default realisations and feature-spreading processes also apply to reflexes of English schwa, as in (2).

(2) a. (apparent default)

organ	oo <u>k</u> ana	canon	ke <u>e</u> nana
cornet	ko <u>o</u> nata	button	pa <u>a</u> tene
mustard	ma <u>a</u> tete		

b. (spreading from a vowel)

Europe	oo <u>r</u> opi	orange	aa <u>r</u> ani
paling	pe <u>e</u> rni	melon	me <u>r</u> ni

The processes of consonant deletion, vowel epenthesis and feature

²For brevity's sake, I shall not discuss in detail the Maori realisations for all English phonemes, assuming that in general the correspondences are sufficiently clear, nor shall I review the processes of consonant deletion and epenthesis.

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spreading in these data are not claimed to be part of the phonology of Maori. I consider them to be common strategies available to any speaker challenged to assimilate foreign words which violate his or her grammar. For example, an English speaker will often pronounce the Russian word *mglá* ('bear') as [mɛglá], inserting an epenthetic vowel, because although English has a variety of consonant clusters it does not tolerate initial /mgl/. But we do not want to conclude from this that English phonology has a rule of vowel epenthesis; surely it is more plausible to say that non-language-specific, common rules of this kind are available to any speaker when the need arises, precisely to deal with non-native input. The assumption that the borrowing rules are not found in the phonology of Maori is consistent with the unpredictability of their operation; rules may apply in variable order and may fail to apply when the structural description is met. This variability of derivation is most clearly shown by those borrowed words which have more than one borrowed form, as the reader will note.

With these provisos in mind, I turn now to the reflexes of English sibilants and the high front vowels in question.

The English sibilants /s, z, ʃ, ʒ/.

The English sibilants /s, z/ are realised in Maori as /h/, preserving the manner of articulation, or less commonly /t/, preserving the place of articulation. In the corpus of borrowings considered, of 128 occurrences of English /s, z/, 109 were realised as /h/ and 19 as /t/. Of 41 occurrences of English /ʃ, ʒ/, 40 were realised as /h/ and one, in (3d), as /t/, this last being perhaps an instance of interference from the spelling (cf. the usual realisation of the suffix *-tion* as *-hana*). A few illustrations appear below.

(3) a. /s, z/ → /h/

pass	pahi	sign	haina
molasses	marahihi	Joseph	hoohepa
rose	rouihi		

b. /s, z/ → /t/

princess	pirinitete	Sir	taa
poison	paitini	trousers	tarautete
	(also paihini)		

c. /ʃ, ʒ/ → /h/

shoe	huu	dish	riihi
measure	meiha, meehua		

d. /ʒ/ → /t/

motion	mootini
--------	---------

The affricates /tʃ, dʒ/ are realised as Maori /h/ or /ti/: of 73 occurrences of /tʃ, dʒ/, 30 were realised as /h/ and 40 as /ti/, with three realisations of /dʒ/ as /ri/; these will be discussed further below.

(4) a. /tʃ, dʒ/ → /h/

orchard	oohete	church	haahi
John	hone		

b. /tʃ, dʒ/ → /ti/

watch	wati	cheque	tiaki
charge	tiaati	chalk	tioka
general	tianara		

c. /dʒ/ → /ri/

George	hori	sergeant	hariana
cartridge	kariri		

Epenthetic high front vowels.

Where an English sibilant is realised as /h/, an adjacent non-final epenthetic vowel is usually /i/, as shown in (5).

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(5) a.

council	kaun <u>i</u> hera	ox	ok <u>i</u> ha
pension	pen <u>i</u> hana	launch	roon <u>i</u> hi
taxi	taak <u>i</u> hi	section	teek <u>i</u> hana
wax	waak <u>i</u> hi		(also tekiona)
	(also waki)		

b.

Australia	ah <u>i</u> tereiria	hospital	hoo <u>i</u> pera
master	maah <u>i</u> ta	postmaster	pohim <u>i</u> ta
basketball	pah <u>i</u> ketepooro	Presbyterian	
whisky	weh <u>i</u> kee		pereh <u>i</u> pit <u>i</u> iriana
	(also wihikee)		
National	nah <u>i</u> nara		

The epenthetic vowels indicated are followed or preceded by /h/ in (5a) and (5b) respectively³. The generalisation that epenthesis adjacent to /h/ surfaces as /i/ word-medially is also supported by the examples in (6a), where the vowel features may have spread from the preceding syllable, and is contradicted only by the words in (6b), where a vowel other than /i/ has spread features to the epenthetic vowel.

(6) a.

policeman	pirih <u>i</u> mana	quince	kuin <u>i</u> hi
Christmas	kirih <u>i</u> mete	biscuit	pih <u>i</u> kete
prince	pirin <u>i</u> ha	boardinghouse	
			porin <u>i</u> hauhi

b.

angel	an <u>a</u> hera	wolf	wuru <u>h</u> i
benzine	pen <u>e</u> hini	compensation	
			kamupene <u>e</u> hiana

The generalisation that word-medial epenthetic /i/ occurs only where

³Note that in *taakihi* and *pereh*i*pit*i*iriana* one might suppose that the vowel features have spread from the vowel of the following syllable. Nevertheless, I have included these words here because such backward spreading of features from a vowel is otherwise only found to an epenthetic vowel in the first syllable, as in (1c) above.

features are spread from /i/ in an adjacent syllable, or adjacent to /h/, is contradicted only by the words in (7).

- (7) a.
 Scotsman katimana
 blacksmith parakimete

- b.
 napkin napikena
 tractor tarakitaa
 wheelbarrow huripara

In (7a) the epenthetic vowel indicated appears at the site of an English /s/, and I shall assume that these occurrences also involve an adjacent /h/ at some point in the derivation; /s/ is realised as /h/ and subsequently deleted.

It is possible that the /i/ of *huripara* is spread from a reflex of English /i/, subsequently deleted, according to the derivation below.

- | | | |
|-------------|-----------|------------|
| wheelbarrow | hwilbærou | |
| | huirparV | |
| | huirVparV | epenthesis |
| | huripara | spreading |
| | huripara | /i/ → Ø |

Alternatively, *huripara* may be a case of folk etymology from Maori *huri* 'turn'. This seems more likely, as the deletion of /i/ as above is unmotivated in Maori and not found elsewhere in the data.

This leaves only two exceptions to the generalisation that word-medial epenthetic /i/ is either spread from a neighbouring /i/, or adjacent to /h/. In other words, /i/ is not a common default value for word-medial epenthesis.

With word-final epenthesis, on the other hand, /i/ is a common default value, as illustrated in (8).

- (8) soap hopi gate keeti
 egg heki paling peereni
 melon meregi yard iari
 (also mereni)

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But where the preceding consonant is /h/, the word-final epenthetic vowel is /i/ with few exceptions, as in (9).

(9) a.

pass	pahi	brush	paraahi
bus	paahi	toast	toohi
purse	paahi	case	keehi
church	haahi	nurse	naahi
brass	paraahi	nurse	neehi
Nagash	naakahi	post	poohi
press	perchi		

b.

goose	kuihi	rose	rouihi
breakfast	parakuihi	boardinghouse	
		poorigihauhi	

c.

cockroach	kokoroihe	grass	karaihe
class	karaehe	glass	karaehe
March	maehe	horse	hooiho
jackass	kaihe		

(first syllable lost)

d.

wireless	waerehe	compass	kapehu
cask	kaho	prince	piriniha
ox	okiha	paralyse	pararaiha

'polio'

The examples in (9a,b) obey the prediction straightforwardly, while the examples in (9c) show a further peculiar property shared by those in (9b); an /i/ or /e/ not required for syllabification is inserted before /h/. The same phenomenon appears in the words in (10a) and perhaps (10b) below.

(10) a.

butcher	poiha (also piha)	measure	meiha (also meehua)
pheasant	peihana	Port Jackson	
cushion	kuihana		poihaakena
percent	paiheneti		

b.

compensation	kamupencheihana
station	teihana
accommodation	kamareihana
carnation	kaaneihana
corporation	kaporeihana
coronation	koroneihana
probation	poropeihana
regulation	rekureihana
arbitration	apitireihana

The examples in (10b) are included here because although English /ei/ may be realised as Maori /ei/, in which case the indicated /i/ would not be epenthetic, the more common realisation of /ei/ is /e/. Excluding the examples here, in 50 occurrences of English /ei/ only 15 surface as Maori /ei/ in the data reviewed.

Every case of epenthetic /i/ or /e/ not required for syllabification is followed by /h/, and there are no other patterns of epenthesis of this kind⁴.

I shall assume that in every case in (9b,c) and (10) the added vowel is first specified as /i/ and spread to the final vowel in (9b,c), with subsequent lowering in some cases. Vowel lowering applies first in the final vowel, as in (11a), and may spread leftward as in (11b); this is consistent with the absence of any forms in this group ending in -ehi, or forms such as *cushion* - *kuehana, in which lowering applies

⁴In the only other comparable pattern, found in the words below, /i/ appears at the site of a deleted /ʉ/. For these cases I suggest that the [+high] specification of /ʉ/ survives on the indicated /i/; in other words, /i/ replaces /ʉ/, unlike (10b,e), where no substitution is apparent.

tank	tajka	handkerchief	hajkiha, ajkiha
anchor	hajka	blanket	parajkete

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non-finally.

- (11) a.
- | | |
|-----------|-----------|
| cockroach | kokoroihe |
| jackass | kaihe |
| grass | karaihe |

- b.
- | | |
|-------|---------|
| class | karache |
| March | mache |

Bearing in mind that the borrowing processes apply in variable order, it seems reasonable to assume that the word-final vowel in *hooiho* has received features spread from the preceding syllable prior to insertion of /i/ before /h/, as in (12), leaving only five exceptions (see (9d)) to the generalisation that wordfinal epenthesis after /h/ is /i/, if not spread from the vowel of the preceding syllable.

- (12) horse hoo*h*
 hoo*h*V
 hoo*h*o
 hoo*h*o

English schwa.

I noted above that reflexes of English schwa are specified in the same way as epenthetic vowels, acquiring features by spreading or variable default. Accordingly, we would expect the reflex of schwa to be /i/ where it is adjacent to /h/, and this is usually the case as in (13)⁵.

- (13) scholarship kara*h*i*h*i
 harness haan*h*i*h*i
 officer aapi*h*a
 English i*h*ari*h*i

⁵The reader will have noticed that I have grouped together English /ə/ and unstressed /ɪ/, on the grounds that the contrast is preserved fully only in British Received Pronunciation. This lack of contrast is also indicated by borrowings such as: basin peihana holiday hararei
 turnip toonapi coffin kaafena
in which a possible /ɪ/ is not distinguished from /ə/.

chemist	keemihi
president	perehitini
register	rehita
tennis	teenihi
virgin	waahina
varnish	waanihi
molasses	marahihi
passage	paahihi
circus	taakihi
December	tiihema

(possibly spread from preceding syllable)

Irish	airihi
handkerchief	haikihā
bicycle	paihikara

(possibly spread from the following syllable)

machine	mihini
---------	--------

Realisation of /ə/ as /i/ by default also occurs in varying environments where there is no /h/, for example:

prophet	poropiti
servant	haawini
paddock	paatiki
pannikin	panikena
olive	ooriwa

but the generalisation that /ə/ if adjacent to /h/ becomes /i/ has only four exceptions:

August	aakuhata
compass	kaapehu
orchard	oohete
wireless	waerehe

The case of *waerehe* may perhaps be assimilated to examples like *March - maehe* above (see (13b)).

To sum up so far, I have demonstrated that a vowel which at some stage of the derivation lacks features (either an epenthetic vowel or reflex of /ə/), if adjacent to (surface or underlying) /h/ almost always surfaces as /i/, or in some cases as /e/ derived from /i/ by lowering. In

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the absence of an adjacent /h/ a word-medial epenthetic vowel rarely receives the features of /i/ by default specification, although /i/ is a fairly common default value for word-final epenthesis and reflexes of schwa.

The English palatals.

The last cases to be reviewed here are the reflexes of English affricates /tʃ, dʒ/, which are /ti/ as in (15a) (all examples given), /h/ as in (15b), and /dʒ/ - /ri/ as in (15c) (all examples given).

(15) a. /tʃ, dʒ/ → /ti/

watch	wati	porridge	paareti
cabbage	kaapeti	garage	karaati
college	kaareti	carriage	kaareti
coach	kooti	peach	pititi
perch	paati	patch	paati
barge	paati	judge	tiati
charge	tiaati	bridge	piriti
sandwich	hanawiti	match	mati
chalk	tioka	chocolate	tiokareti
general	tianara	chain	tiini
gin	tiini	sausage	tootiti
JP	tieipii	jam	tiaamu
German	tiamana	Japanese	tiapanii
archdeacon	atiriikona	cheese	tiihi
engineer	enetinia	wedge	weti
cheque	tiaki	jack ('flag')	tiaki
	(also haki)		(also haki)
jug	tiaka	chairman	tiamana
	(also haaka)		(also heamana)

b. /tʃ, dʒ/ → /h/

Egypt	ihipa	July	huuræ
register	rehita	orchard	oohete
church	haahi		

c. /dʒ/ → /ri/	
George	hori
sergeant	hariana
cartridge	kariri

The examples in (15a) fall under the generalisation that /i/ which is not derived from English /i/ or spread from neighbouring /i/ is adjacent to /h/ at some point of the derivation, if we assume the analysis in (16) where the affricates are treated as consonant sequences.

- (16) a /tʃ, dʒ/ → /tʃ/ → /th/ → /ti/
 b /tʃ, dʒ/ → /tʃ/ → /th/ → /h/
 c /dʒ/ → /dʒ/ → /rh/ → /ri/

Note that (16c) applies to the examples in (15c), and is consistent with the fact that almost half the occurrences of English /d/ in the data become Maori /r/.

The source of /i/.

In presenting the data of the previous sections I have asserted without discussion that the characteristic environment I demonstrate for /i/ is an adjacent /h/. On common assumptions this is a puzzling phenomenon, given that a 'characteristic environment' of this kind is generally explained by rules of feature spreading, such as the spreading of [+labial] from /p/ to /u/ in *whip* → *wepu*: (see also (1d)). The problem here is that the glottal fricative is standardly analysed as bearing no supralaryngeal features at all. This suggests that we should reconsider the possibility that the recurring presence of /h/ in the relevant data is fortuitous, and that the significant feature of the environment is something else.

The English palatals.

I suggested above (16) that the derivation of the affricates is

$$/tʃ, dʒ/ \rightarrow /tʃ/ \rightarrow /th/ \rightarrow /ti/$$

thus grouping the /i/ of *chalk* → *tioka* with the /i/ of *blacksmith* →

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parakimete, appearing at the site of a deleted /h/. Now we could alternatively propose that the [+high,-back] specification which surfaces as /i/ originates as the [+high,-back] specification of /ʃ, ʒ/, perhaps by direct substitution of /ti/ for /ʃ, ʒ/, so that /ti/ is fully specified in the initial representation; such an analysis seems reasonable for these words.

It does, however, leave open the question of the survival of the [+high,-back] features in those cases where /ʃ, ʒ/ → /h/, and the effects shown above still apply, as in *church* → *haahi* etc; we would have to fall back on the notion of floating features for these.

But of course the real problem with using the palatals as the source of /i/ is that it leaves quite unaccounted for all those cases where the source of /h/ is not palatal, but non-original /i/ appears. Perhaps we should reexamine the set of phonemes realised as /h/.

The feature [grave]

When we take the set of English phonemes realised as /h/, /s, z, ʃ, ʒ, ʃ, ʒ/, and search for a possible relationship with /i/ and occasionally /e/, we seem to have found an answer: dental, alveolar, palato-alveolar and palatal consonants form a natural class with front vowels, defined by the acoustic feature [-grave]. This avoids the difficulties which arise when we seek an English source for [+high,-back], as the alveolars are included here.

There are two problems. First, the articulatory characteristics which produce acoustic gravity are supralaryngeal, and so /h/ is not specified for the feature [grave]. So where a sibilant is realised as /h/ we might propose that the feature [-grave] becomes a floating feature, which may be mapped to the left or right of /h/, or lost in the derivation, which would account for the cases in which /h/ as the reflex of a sibilant produces no /i/.

But where the reflex of a sibilant is /t/, which is specified as [-grave] in any case, we would expect /t/ to show the same properties as /h/. In fact, /t/ from any source, sibilant or nonsibilant, should show the relevant properties. This is not the case; compare the examples below.

(17)	<u>molasses</u>	<u>marahihi</u>	cf.	<u>trousers</u>	<u>tarautete</u>
	<u>officer</u>	<u>aapiha</u>	cf.	<u>post office</u>	
					<u>poutaapeta</u>
	<u>boardinghouse</u>		cf.	<u>publichouse</u>	
		<u>poorihauhi</u>			<u>paaparakaauta</u>
	<u>harness</u>	<u>haanihi</u>	cf.	<u>princess</u>	<u>pirinitete</u>
	<u>hospital</u>	<u>hoohipera</u>	cf.	<u>slate</u>	<u>tereti</u>
	<u>chemist</u>	<u>keemihi</u>	cf.	<u>interest</u>	<u>initarete</u>

It seems that the feature [-grave] of English alveolars and palatals remains phonologically active only where the reflex is [0grave], not where it is [-grave], which is most unlikely.

We would also expect, if the feature [-grave] is responsible for the vowels at issue, that non-original /i/ would be found with other segments derived from [-grave] phonemes, in addition to the /t/ illustrated in (17); these are /t, r, n/. Although word-final epenthetic /i/ occurs commonly after these phonemes, this is probably a function of the absolute greater frequency in the data of alveolar consonants; /i/ is apparently a word-final default value and also appears after labial and velar consonants (see (8)). The other word-internal effects on epenthesis and schwa are not found with /t,r,n/.

This leaves us with Maori /h/.

Maori /h/.

I pointed out earlier that a glottal fricative has no supralaryngeal features to spread, and has no specification by which it forms a natural class with /i/ and possibly /e/. Assume then that /h/ in Maori is underlyingly not a glottal fricative, but a palatal/velar fricative ([+high, 0back]), as suggested by Hohepa's comments on its surface forms.

Recall that Biggs (op. cit.) states 'By the early 19th century Maori [hy] from *s had become [h] everywhere except in the far north of the North Island', thus disagreeing with Hohepa, who claims that the [hy] alternant is present in modern Maori.

This study has no bearing on the modern surface forms, but the data indicate that /h/ was [+high], at least in underlying representations, throughout the 19th century and into the 20th, when these

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borrowings were made (consider *Egypt, German, sergeant, cartridge, Japanese/*, which are probably wartime borrowings, although *Egypt* could be from the New Testament; *cornet, publichouse, wireless, pan-nikin, slate* (probably a child's writing slate), where either the terms are little used nowadays or the objects themselves are rare, and *Port Jackson*, the old name for Sydney.)

Biggs' remarks also raise the question whether Maori /h/ as a reflex of an English sibilant differs from Maori /h/ elsewhere in the borrowings or the native vocabulary: if Biggs is correct, /h/ in the native vocabulary, which derives from Proto-Polynesian *s, used to be /hy/ but had developed into /h/ almost everywhere by the early 1800s, at least in the surface forms. Supposing that Maori /h/ had really lost all its supralaryngeal features at all levels by the early 1800s, when extensive contact with English was just beginning. One might reactivate /s/ → /hy/ for the sibilants, but map other fricatives into /h/. Although very few examples bear on this question, because /h/ as the reflex of a non-sibilant is uncommon, those in (18) suggest that /h/ from any source is [+high].

(18)	Ruth	ru <u>hi</u>
	tablecloth	teparakoro <u>i</u> he
	wolf	wuru <u>hi</u>

cf. golf korofa

I conclude that /h/ in borrowed words generally is identical to native /h/, and is [+high], at least underlyingly.

The instances of non-original /i/ reviewed above can then all be described as the output of a process spreading the place features of a consonant onto an adjacent vowel; this will account for /i/ as the realisation of epenthetic vowels or schwa when adjacent to /h/.⁶ In

⁶I assume that the value [-back], or more probably [-labial], from which [-back] follows for vowels, is assigned by redundancy rule. Although space does not permit a discussion of this point in detail, the feature [labial] is 'strong', in that labial consonants are not subject to deletion. Moreover, rounded vowels are very rare as default values, accounting for only 14 out of 310 apparent default vowels. I conclude then that [+labial] is the contrastive underlying value for the feature and that a segment bearing no underlying value for Labiality will receive the negative value by redundancy rule. The assignment of [-back] to [-labial] segments is also redundant, and in fact it seems that [back] is not a contrastive feature in Maori (so not specified in underlying representations); although there are numerous examples

words like *goose* → *kuihi*, an epenthesis process adds a vowel slot between an existing vowel and a following /h/; subsequently the [+high] feature from /h/ spreads to the medial epenthetic vowel, and then to the vowel provided by word-final epenthesis, with subsequent lowering in some cases as above.

Where /i/ appears at the site of a deleted /h/ we could say that the feature [+high] spreads to an epenthetic vowel prior to deletion of /h/, as was suggested above; alternatively, there is evidence that a continuant consonant may link directly to a vowel slot, as in (19).

- (19) shave he breakfast parakuihi
twine tuaina man o'war manuao

This suggests an account of, for example, *blacksmith* → *parakimete* in which /i/ derives by the direct linking of /h/ to a vowel position, where it becomes voiced by redundancy rule, and the same account may be given for the English affricates realised as /ti/ or /ri/.

Conclusion.

Despite the unpredictability of the data studied here, I believe it is clear that the occurrence of non-original /i/ is significantly related to the presence of /h/. I have claimed that the relationship between /h/ and /i/ in the relevant cases is one of spreading the feature [+high] from /h/ to /i/, which assumes that /h/ is underlyingly a [+high] fricative, in keeping with both Biggs' remarks on the history of Maori /h/, and Hohepa's remarks about its surface forms.

References.

The data were chiefly drawn from:

Williams, H. W. 1971. *A Dictionary of the Maori Language*. Seventh edition. Wellington: Government Printing Office.

Bauer, W. A. 1981. *Aspects of the Grammar of Maori*. Doctoral dissertation: University of Edinburgh.

of /u/ spread from /m, p/. /u/ spread from /k, ŋ/ occurs in at most three examples:
doctor takuta August sakuhata
humbug hamupaku

The glottal fricative in Maori

Other references:

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