NASALISATION IN KEWA DIALECTS

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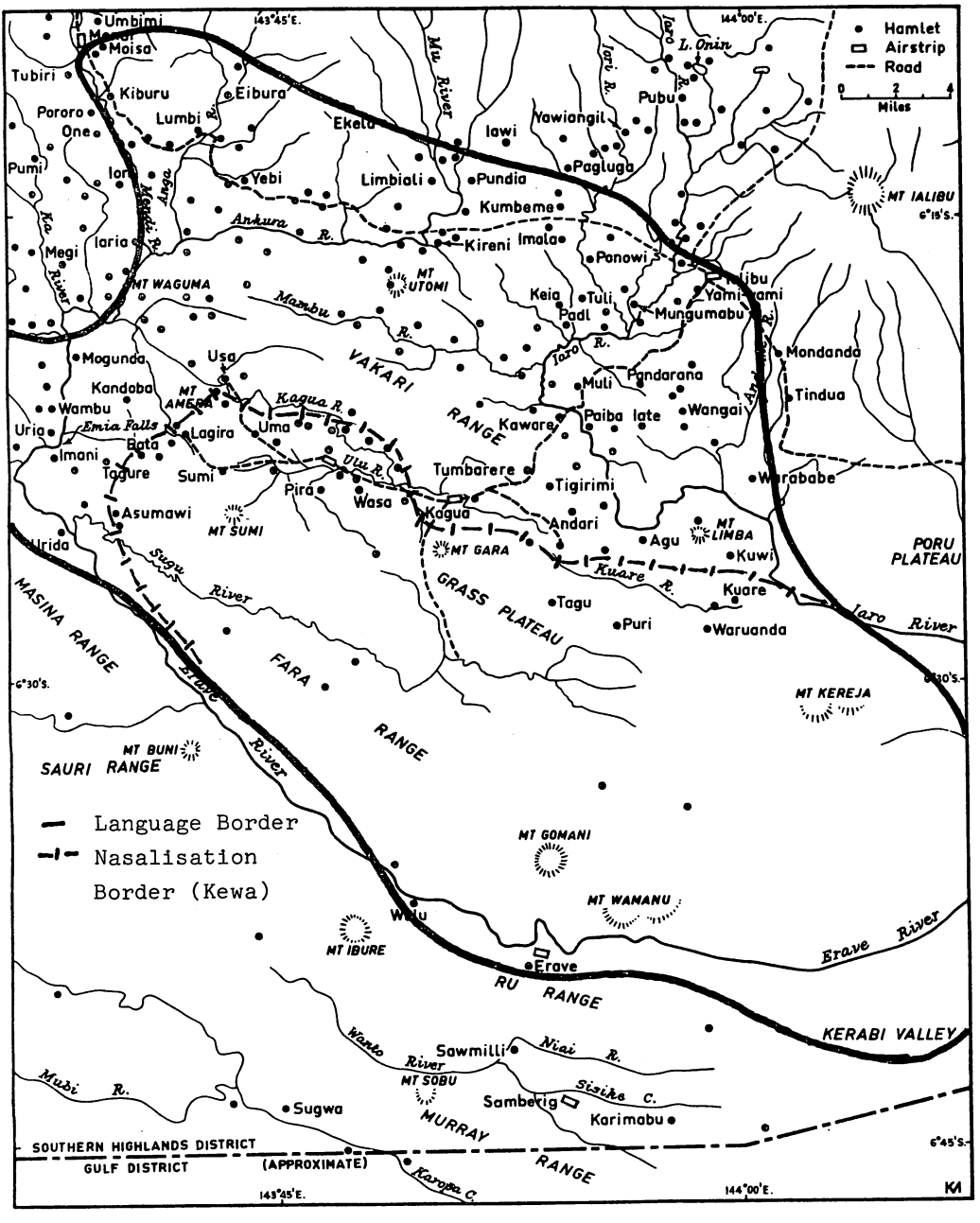
0. Introduction

Nasalisation in the Kewa language is found, in general, only south of the Kagua River and Kware Valley area (see accompanying map).[1] In the Northwest sub-dialect area, the northern part of the West dialect and most of the East dialect (except for the southernmost border) the nasalisation of vowels is rarely heard. When heard it is by speakers who have migrated into the area from the south, either due to marriage, or for some other reason.

The three main dialects of Kewa, as well as minor sub-dialectial areas have been outlined in some detail elsewhere (Franklin 1968). A great deal is also known about the languages which surround the Kewa territory, particularly to the south and west (Franklin, ed. 1973). It has been found, for example, that a so-called "nasalisation belt" encompasses a large part of the Southern Highlands, as well as the Gulf District and westward into the Western District (Franklin and Voorhoeve, 1973). In this article I describe how certain changes in Kewa have contributed to vowel nasalisation and also briefly comment on nasalisation from other languages adjacent to the general area.



KEWA LANGUAGE AREA

1. Phonemic Nasalisation

The phonemic status of vowel nasalisation can be demonstrated in two main dialect areas of Kewa. In the following examples pairs 1-5 are from the South dialect, 6-10 are from the West. Nasalisation is represented orthographically by a macron over the vowel.

(1)	ki	'four'	(6)	aa	'man
(1a)	k̄ī	'hand'	(6a)	āā	'leg'
(2)	su	'ground'	(7)	aai	'banana'
(2a)	sū	'thumb'	(7a)	āi	'cousin'
(3)	so	'up there'	(8)	sa	'put it'
(3a)	sō	'victory leaf'	(8a)	sāā	'we two'
(4)	pu	'urine'	(9)	ama	'mother'
(4a)	pū	'liver'	(9a)	amāā	'outside'
(5)	kale	'I have given..'	(10)	roba	'to break'
(5a)	kāle	'ear'	(10a)	robāā	'stomach'

Evidence from words in other village areas indicates that vowel nasalisation may be a feature of /e/ as well, e.g.: l̄ē 'eye', ēke 'tongue', in the SK Kuare (Kilibimi village) area. In other words, the feature is presently found with all phonemic vowels, although it is most frequently associated with a central vowel, particularly /aa/.[2]

Taken on the whole, however, vowel nasalisation in the lexicon is infrequent in Kewa and rare in the morphology. There seem to be several historical reasons for the present vowel nasalisation, but the main one is the loss of a relic suffix. The loss of an intervocalic *-k-, certain sound changes, such as *l > n or *nd > t, in which case certain adjacent vowels retain the nasal feature, have also contributed to the present status of vowel nasalisation. An intermediate stage of *l > V̄l may be implied in the *l > n change.

2. The Relic Suffix

In certain areas of Kewa, particularly SK, the form aŋge 'foot, leg' will be found. The final syllable is a retention of the suffix *-ŋgV, which is reflected as -ŋgV, -kV, and -nV in other languages of the family.[3] In other villages of Kewa there is a general progression of forms which clearly reveals how the nasalisation feature of the suffix was retained in some areas, but lost in others. For example: aŋge > ãŋge > ãã, while elsewhere age > aa. The correspondence of ŋg : g is a common one between South Kewa on the one hand and East and West Kewa on the other.

The particular vowel of the suffix is variable and follows a present day morphophonemic rule of vowel harmony which is essentially the same in Kewa and several other languages in the family. The rule is that the vowel of the suffix is identical with the final vowel of the stem, unless the final vowel is a, in which case the vowel of the suffix is e. The rule may be represented as:

$$V \rightarrow \begin{bmatrix} V\alpha \\ e \end{bmatrix} \; / \; \begin{bmatrix} V\alpha \\ a \end{bmatrix} \; -C\_\_\_, \text{(where C is any velar or nasal consonant)}$$

Some examples of words in present day Kewa with vowel nasalisation reflecting the loss of the relic suffix include: (11) masãã 'back'; (12) orãã 'palm'; (13) ekatãã 'little finger'; (14) pasãã 'shoulder'; (15) agãã 'month'; (16) mãã 'neck'; (17) arotãã 'armpit'; (18) popãã 'wing'; (19) kidipãã 'claw, finger-nail'; (20) rãã 'bush'; (21?) ẽ 'garden'; (22) kagãã 'new, green'; (23) sãã 'we two'; (24) nĩãã 'we all'.

In 11-19, as well as many words in 1a-10a, body parts are represented. Body parts and kinship terms commonly reflect the relic suffix in other languages of the family, although free pronouns, demonstratives, certain interrogatives, and some qualifiers have also retained it.[4]

There is also evidence from PE that Kewa dialects which reflect vowel nasalisation in contiguous vowels have lost an intervocalic nasal, rather than simply the relic suffix:

(25) kāĩ 'cross-cousin' < *kani, which in turn came from PE *kani-nki

It is possible that mãĩ 'uncle' had a similar origin and other two vowel sequences may suggest similar origins: kãũ 'lizard'; pãẽ 'check'; sãũ 'hornbill'; wãĩ 'suddenly'; and nõẽ 'needle'.

3. Sound Changes

Other words with vowel nasalisation reflect the change of *l>n, or *nd>t in Kewa. Examples of the first are as follows:

(26) kãle 'ear < PE *kale -nge

(26) ããne < PK *kale

It is possible to suggest that the vowel nasalisation was a direct result of the loss of PE *-nge and that no intermediate stage was involved. If this is the case it makes it difficult to account for the lack of vowel nasalisation on the vowel e, which was contiguous to the pre-nasalised relic suffix. In fact when such direct losses of the relic suffix can be attested without any necessary intermediate stage the final vowel is nasalised in certain dialect areas:

(27) lẽ 'eye' < PE *le-nge

The dialectial for ini 'eye' in West Kewa must then reflect:

PE *le-nge > Øi - ni, where l:Ø is a regular sound correspondence resulting in the consequent e > i, followed by vowel harmony.

Although dialects of Kewa reflect l : n as regular correspondences, this is never the case with relic suffixes. By comparing dialects of Mendi, as well as Kewa, the following correspondences are noted:

(a) before high vowels - l : n : ñ : ɬ : tɬ : Ø

(b) elsewhere - l : n : ñ : Ø

Further examples of vowel nasalisation contiguous to l are as follows:

(28)	wēlē	'nose'
(29)	pāle	'fat over the ribs'
(30)	mōle	'fog'
(31)	sāla	'type of fish'
(32)	ōlemōle	'something'
(33)	āāli	'husband'

Examples (28), (29), and (33) are suspect of either an intermediate stage where l > VlV, the loss of *-ŋgV, or both.

As indicated above, vowel nasalisation may reflect a loss not always apparent today. Note for example, these dialect variations: (30a) moāe 'fog, cloud; (34) peāu 'nose'; and (35) koāu 'back'. Such three vowel sequences are rare, but suggest a contiguous nasal at some point in time.

The loss of the prenasalised feature of a voiced stop is more easily seen in many words, but ŋg : g is the most common:

(36)	āgale	< aŋgale	'speech'
(37)	pāga	< paŋga	'to hear'

The correspondence nd : t is also found:

(38)	maīta	< mandia	'to carry in a bag'
(39)	pitāā	< pintaa	'root'
			as found in a few areas of Kewa

In one area mb : b is found:

(40) bẽbõ < mbembo 'to stir up'

4. Morphology

In SK in certain verb paradigms nasalisation accompanies only certain tenses. Note for example the future and remote past tenses for mẽã 'to fetch':[5]

Fut.	Sg.	Dl.	Pl.	RP	Sg.	Dl.	Pl.
1	mula	mĩlipa	mĩlima	1	mĩsua	mĩsipa	mĩsima
2	mĩli	mĩlipi	mĩlimi	2	mĩsi	mĩsipi	mĩsimi
3	mĩlia	mĩlipi	mĩlimi	3	mĩsa	mĩsipi	mĩsimi

It seems likely that mẽã < *minV, with the common n >l change and subsequent retention of the nasal feature. The form miningi 'to hold in the hands' in Enga lends some support to this reconstruction. In each paradigm of mẽã, vowel nasalisation accompanies only the morphophonemically determined stem vowel /i/.

Other instances of vowel nasalisation in SK occur in the future tense of a few verbs. Some examples are:

(41)	toã̃	'I will speak'	<	la	'to speak'
(42)	lamulã̃	'I will marry'	<	lamua	'to marry'
(43)	punyulã̃	'I will shepherd'	<	púnya	'to shepherd'
(44)	poloã̃	'I will chop'	<	poa	'to chop'
(45)	polã̃	'I will go'	<	pu	'to go'

Forms such as (41) and (44) correspond with to-wa 'I will speak', in the NW area of Kewa. It seems likely that the loss of intervocalic -w- has resulted in nasalisation in some cases. Where ã follows l this may again be the result of *l >n.

5. Other Examples

In this section examples of words with vowel nasalisation are listed according to some of the historical factors which have influenced the nasalisation.

5.1 Contiguous to ŋg or *ŋg:

agā or āga	'pandanus'		
ēkapita	'comb'	nōŋgo	'girl'
ōge	'small'	pūŋgu	'to stink'
rōgaa	'to bind'	tāŋga	'ashes'
yōŋgale	'skin'	pāŋge	'also

5.2 Contiguous to the relic suffix:

abuāā	'head'	malāā	'index finger'
ō	'scales, scab'	rē	'base'
wasāā	'soul, shadow'	adāā	'beg'
kagāā	'new'	medāā	'the same'
arāā	'father (reference)'	yō	'leaf'
pū	'liver'		

5.3 Contiguous to a present day nasal:

kūma	'soft'	mūma	'quail'
nāā-	'negative'	nū	'net bag'

5.4 Loss of an intervocalic consonant:

kapēā	'lid'	nelēā nelēā	'cicada'
nāī	'boy'	wāī	'suddenly'

5.5 Contiguous to *-l-:

wīli	'nose'	kāle	'ear'
ekāli	'little finger'		

5.6 Central vowel insertion:

moāe	'fog'	peāu	'check'
noāe	'armbone'	koāu	'back'

5.7 Contiguous to mb or PK *nd:

kalāmbe	'clavicle	māĩtya	'cricket'
pĩtyaa	'root'	pāmba	'to fill up'

5.8 Other factors:

kāyo pi	'egg yolk'	kāyo	'red'
sāyale	'wild pig'		

The latter may be the result of *nd : ny : ty : y correspondences found in a few examples.

6. Other Languages

Phonemic vowel nasalisation occurs in other languages of the Engan family (Sau or Samberigi, Huli, Wiru), the Teberan family (MacDonald 1973), Pawaia (Trefry 1969), Fasu and Foe on opposite sides of Lake Kutubu (Franklin and Voorhoeve 1973), as well as the Bosavi area and the Strickland Plains (Shaw 1973). This is an area inland in the Gulf and Southern Highlands from the Vailala River in the east to the Strickland River in the west. There are also some languages west of the Strickland with vowel nasalisation.

It is only in the Engan family that we can demonstrate at present some of the historical factors responsible for vowel nasalisation.

Examples where vowel nasalisation in free pronouns reflect the loss of an adjacent nasal consonant can be found in Huli and Sau: i for first person singular in both languages. The form is identical for second person singular in Huli, but with a low tone. Other languages in families in the nasalisation belt (such as the Strickland Plains and Lake Tebera area) also have a nasalised vowel for first person singular. Certain languages of these same two families have a nasal consonant plus nasalised vowel for the second person, singular form, for example nyi in Suri (in the Teberan family) and no in Kubo (in the Strickland Plains).

There is no evidence of the relic suffix in present day languages occurring with natural objects, foodstuffs, or verbs. It seems that the -k E habitual suffix marker in present day Enga is a homophonous, but different, form.

In the Teberan family George MacDonald (personal communication) reports that vowel nasalisation is not particularly related to body parts although a few, such as sāgā 'leg, foot', penāli 'chin', and pisīlī 'lower leg', have nasalised vowels. In fact in Dadibi (of the Teberan family near Karimui) MacDonald reports that the bulk of the forms with nasalised vowels are nouns which are names of items in nature, e.g. hō 'star', tō 'ground', tōli 'cassowary type', yōwī 'moss type', etc. In addition certain descriptives and a few verb forms exhibit vowel nasalisation.

MacDonald notes two interesting features about vowel nasalisation in Dadibi: 1. wherever there is a backed g in the language, with like vowels contiguous, the vowels are nasal, except for -igi, e.g. sāgā 'foot, leg', sēgē 'heavy', sōgō 'tobacco', but sigi 'cane type'; 2. syllables with nasalised vowels are always low tone, except for 3rd singular pronouns.[6]

One additional observation in Dadibi, which parallels historical developments in Kewa, is that the normal recent past suffix -ali > -ani, when the verb stem vowel is nasalised, e.g. kē 'to pull' + -ali > kēāni 'pulled'.

In H. B. Kerr's excellent Wiru dictionary, unfortunately as yet unpublished, there are examples which may suggest that vowel nasalisation developed along lines similar in Wiru:

1. adjacent to velars (perhaps a suffix):

āko	'open mouth'
kāūko	'shatter'
kōko	'disobey'
pāko	'break open'
tāko	'multiply'
tōko	'to utter words'

All of these are verbals with a final syllable of -ko.

2. in the first of two vowel sequences:

āi	'fat'
āu	'to bark'
kāia	'many'
kīo	'to be straight'
lēo	'crystal of salt'
māio	'pearl shell crescent'
pōi	'saliva'
tīo	'cockroach'

This suggests the loss of *-n-.

Similar patterns may be found in Fasu and Foe, suggesting either a relic suffix with a velar or alveolar nasal or in Fasu something like *n->h. Some examples in Fasu are:

hī	'eye'
hāī	'egg'
hē	'water' (cf. the earlier Dadibi example)
hāse	'pandanus'
ēkē	'stone'

In Foe:

ī	'eye'
gī	'shoulder'
sāe	'hair'
gumūxu	'heart'
gesā	'dog'
āge	'pandanus'
gāna	'stone'
kohū	'plant'
hūa	'mother'

The language families in the general area (Franklin, ed. 1973) where vowel nasalisation can be found, can then be summarised as follows:

FAMILY	LANGUAGES
Teberan:	Dadibi, Polopa dialects
Pawaia:	Pawaian dialects
Kutubuan, E. and W.:	Foe, Fasu, Namumi
Engan (West Central):	S Kewa, Sau, Huli, Wiru
Bosavian:	Kaluli, Biami
Strickland:	Bibo, Honibo, Kubo, Samo
Turama-Kikorian:	Ikobi-Kairi, Kairi, Mena

FAMILY	LANGUAGES
Inland Gulf:	Ipiko, Minanibai
Unclassified:	Porome
Miscellaneous:	Bogaya, Pa

7. Conclusion

Vowel nasalisation is an important clue for any historical comparison in the south, south-central area of Papua New Guinea. The processes which have led to the development of vowel nasalisation in Kewa will most likely be paralleled in other languages of the general area.

NOTES

1. Kewa is spoken by over 40,000 people in the Southern Highlands. Although numerous publications have appeared, the main studies have been on the dialects (Franklin 1968) and a grammar of West Kewa (Franklin 1971). Abbreviations used here are PK = Pre-Kewa, PE = Proto-Engan, WK = West Kewa, EK = East Kewa, and SK = South Kewa. Research has been supported, in part, by the Papua New Guinea Research Fund of the S.I.L.

2. See Franklin and Franklin (1962:29) for earlier considerations of /a/ in East Kewa as a unit or as a geminate cluster. In West Kewa, as well as in this paper, [ə] and [a] are represented in the orthography by a and aa, respectively. The

latter most frequently arises in Kewa when a consonant contiguous to a higher central vowel is lost, or in some cases, when a syllable is lost. There are other factors as well which help to account for the present day contrast of the two central vowels. The vowel /aa/ is also frequently the historical result of a contiguous consonant loss.

3. Further details may be found in Franklin (1974, 1975), as well as in Kerr (1975). The suffix is also apparent in languages of the Kutubu-Bosavi area and is reflected in forms such as -nV ~ -kV in Fasu and -xV in Foe (Franklin and Voorhoeve 1973:174).

4. R. Lang(1970:124) implies that the habitual suffix -nge/-ngi in present day Enga can be derived from the same relic proto-form. Lang states that this is the only area in Enga where the form is still viable and considers that -gE might be considered a verbal nominaliser. There is a nominalising form -ne in Kewa which could be related.

5. Abbreviations are: Fut. = Future; RP = Remote Past; 1, 2, 3 = first, second and third person; Sg. = Singular; Dl. = Dual; Pl. = Plural.

6. MacDonald relates this to Pawaia (Trefry 1969:13). He feels that the impression of more nasalisation in Pawaia can be attributed to verbal suffixes with nasalisation.

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