Shifting stress: synchronic variation as a manifestation of diachronic change in Kokota (Oceanic) prosody.

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1 Introduction

Stress assignment in synchronic Kokota (Oceanic, Solomon Islands) is characterised by considerable variation. Some words with a particular segmental structure may be assigned stress on one pattern, while others with the same structure may be assigned stress on another pattern. A single lexeme may be assigned stress on one pattern by some speakers, and on another by others. This variation occurs even to the extent that a single lexeme may be assigned stress variably by a single speaker.

There are, however, patterns to this variation. This paper describes the variation, accounting for it in terms of changes under way in the language, claiming the variation results from three factors: irregular stress patterning on some lexemes resulting from the prosodic shadow of lost morphological complexity; the gradual regularisation of these irregularities; and an overall shift in the language's stress regime from moraic trochees to syllabic trochees. The paper then considers motivation for the shift from moraic to syllabic stress, proposing that such changes flow from earlier changes in syllable structure.

2 Language background

Kokota is an Austronesian language spoken on the island of Santa Isabel in the Solomon Islands. It is an Oceanic language belonging to the North West Solomonic branch, within the Meso-Melanesian linkage of Western Oceanic. (Ross 1988:215-218, 2002:101-103) The Santa Isabel languages form a discrete subgroup within North-West Solomonic. It is not yet clear whether they form a higher order subgroup with the New Georgia subgroup of North-West Solomonic.

Kokota is spoken by about 900 people in three villages on Santa Isabel. It is endangered through intermarriage and the expansion of Zabana and Maringe speakers into traditional Kokota territory. Kokota's neighbour to the immediate west, Laghu, died with its last speaker in 1984.

Prior to my work Kokota was documented only in a word list of 320 items published by Tryon and Hackman (1983). No other materials, published or unpublished, existed. My Kokota work to date has resulted in several papers (particularly 1999b and 2002) and a forthcoming reference grammar (the only published grammar of a North West Solomonic language).

3 Kokota syllable structure

Onsets: A syllable may have no onset, an onset of a single C, or an onset cluster of two Cs (within certain constraints).
Nuclei: The nucleus may consist of one V or a diphthong of two Vs within certain constraints.
Codas: Apart from the result of surface final vowel syncope, Kokota does not allow syllable codas.

4 Stress assignment data for monomorphemic non-loan roots

Roots with light (ie. CV) syllables only:

two syllable	σ́ σ	*káme* 'hand'
three syllables	σ́ σ σ ~ σ σ́ σ	*mákasi* 'bonito', *namhári* 'fish', *fufúnu* 'begin', *kókopa ~ kokópa* 'door'
four syllables	σ̀ σ σ́ σ	*dìhunáre* 'be rough'
five syllables	σ̀ σ σ́ σ σ	*pàraháḡala* 'giant'

Roots with heavy (ie. CVV) syllables:

one heavy syllable	σ́	*mái* 'come'
two syllables, 1st heavy	σ́ σ	*báesu* 'shark'
two syllables, 2nd heavy	σ́ σ ~ σ σ́	*dátau* 'chief', *karáo* 'basket', *kálae ~ kaláe* 'reef'
three syllables, 1st heavy	σ̀ σ́ σ ~ σ́ σ σ	*òilági* 'power', *sáigona* 'evening'
three syllables, 3rd heavy	σ̀ σ σ́ ~ σ́ σ σ	*lèḡohái* 'be thin', *nhàgarái ~ nhágarai* 'banyan'
two syllables, both heavy	σ̀ σ́ ~ σ́ σ	*ḡàuái ~ ḡáuai* 'be distant'

5 Stress assignment on roots with 3 light syllables

Citation forms for 243 non-loan monomorphemic roots consisting of 3 light syllables were elicited from four speakers ranging in age from 17 to 70. Of these 243 roots:

182 (74.9%) were assigned antepenultimate stress by all four subjects.
25 (10.3%) were assigned penultimate stress by all four.
36 (14.8%) were assigned stress on the penult by some subjects and on the antepenult by others.

These figures break down as:

	σ́ σ σ	σ σ́ σ	variable
roots with possible accreted article	16 (76.2%)	4 (19.0%)	1 (4.8%)
root with accreted causative particle	0	1 (100%)	0
roots with initial echo syllable	58 (52.3%)	19 (17.1%)	34 (30.6%)
roots without possible accretion or echo syllable	108 (98.2%)	1 (0.9%)	1 (0.9%)

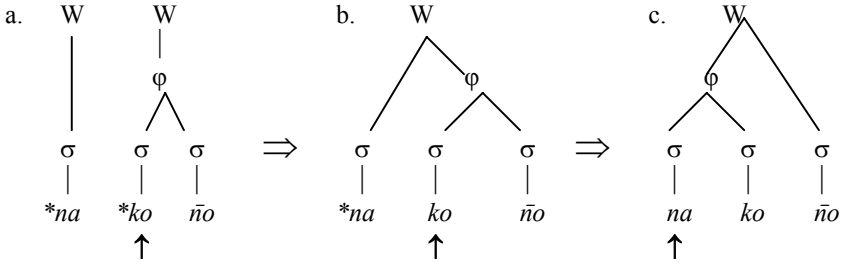
Table 1: Distribution of stress assignment by possible fossilised morphology.

It appears that some roots are irregularly stressed because they retain the prosodic shadow of lost morphological complexity. For roots of three light syllables without this prosodic shadow stress is assigned to the first syllable.

6 Variable stress assignment reflecting lost morphological complexity

In (1)a. the Proto Oceanic article **na* is a separate word and stress is assigned to the leftmost of the two syllables of the root **koṉo* (see synchronic Zabana *koṉo* 'hornbill'). In the interstage b. the article has accreted to the root but stress remains on the penultimate syllable of the new monomorphemic trisyllable, reflecting the prosodic shadow of the lost morphological complexity (**na* has not been retained as preposed article in Santa Isabel languages). In c. the synchronic Kokota form *nakoṉo* 'hornbill' is assigned stress regularly to the leftmost syllable of the now trisyllabic root.

(1)



Nákoṉo has been fully regularised. Other roots such as *nahání* 'rain' are still at the interstage and have yet to be regularised. Others, such as *náklihe* ~ *naklíhe* 'tree sp.' are midway between stages b. and c. - they are undergoing regularisation in synchronic Kokota and are stressed variably. It is noteworthy that of these three examples, it is the high frequency item *nahani* that has yet to be regularised.

A similar process applies to historical reduplication where the interstage has stress assigned to the first syllable of the historically unreduplicated root and stage c. has stress regularised to the initial syllable.

7 Moraic theory (Hayes 1995)

Stress assignment operates on the basis of three basic parameters:
- syllables v mora
- trochees v iambs
- left-aligned v right-aligned feet

Syllables versus mora:
- Some stress systems count syllables, others count mora.
- A mora is a unit of weight - any segment in a nucleus or coda represents one mora.
- Short vowels = 1 mora; long vowels and diphthongs = two mora.
- Single consonant codas = 1 mora, 2 consonant codas = two mora.
  (For our purposes it's only necessary to consider syllables with one mora (CV) or with two mora (CVV or CVC).)
- Syllables of one mora are light syllables, syllables with two mora are heavy syllables.
- In syllabic systems two syllables form a foot (regardless of whether they are light or heavy).
- In moraic systems two mora form a foot (regardless of whether they fall in one or two syllables).

Trochees versus iambs:
- Trochaic stress assigns stress to the lefthand syllable or mora in a foot.
- Iambic stress assigns stress to the righthand syllable or mora in a foot.

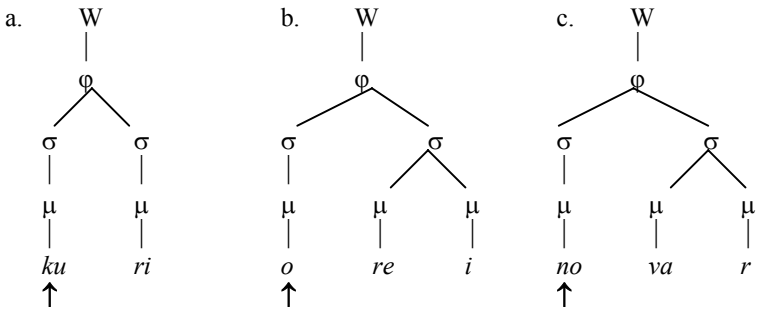
Left-aligned versus right-aligned stress:
- In left-aligned stress feet are aligned with the left margin of the word. This means the first and second syllable or mora are assigned to one foot; the third and fourth to the next, etc.
- In right-aligned stress feet are aligned with the right margin of the word. This means the last and second last (penultimate) syllable or mora are assigned to one foot; the third last (antepenultimate) and fourth last (preantepenultimate) to the next, etc.

8 True 'penultimate' stress

- Stress is trochaic.
- Feet are aligned with the right margin of the word.

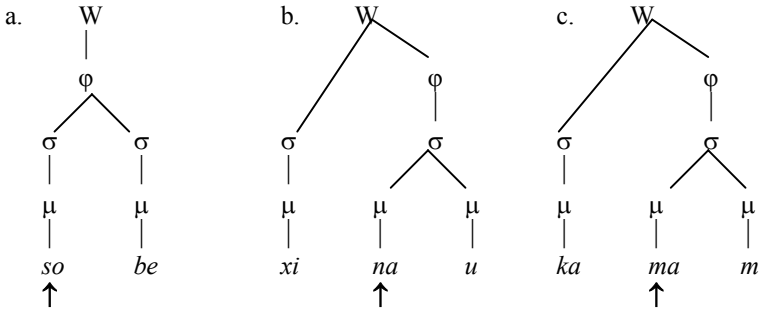
Syllabic trochees (Sye (Vanuatu)): *kúri* 'dog'
órei 'scratch
nóvar 'wall'

(2)



Moraic trochees (Tamambo (Vanuatu)): *sóbe* 'follow'
xináu 'something'
kamám 'we (EXC)'

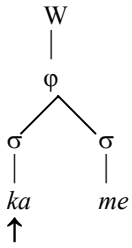
(3)



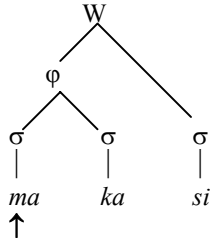
9 Regular stress assignment in Kokota roots with light syllables

- Stress is trochaic.
- Feet are aligned with the left margin of the word.

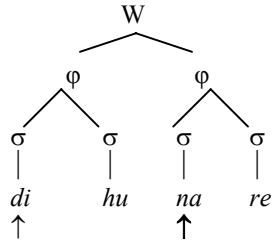
(4) a. Two syllable roots:



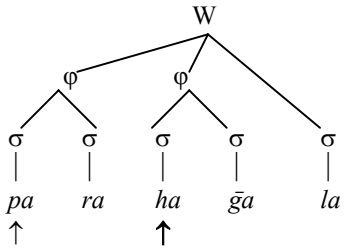
b. Three syllable roots:



c. Four syllable roots:



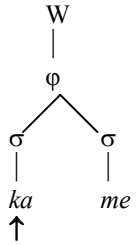
d. Five syllable roots:



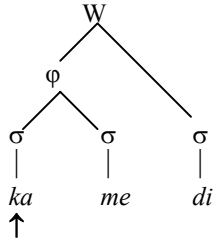
10 Suffixes and enclitics

The addition of suffixes or enclitics creates longer words across which the regular stress regime applies. The addition of a one syllable suffix to two syllable root doesn't affect stress because it doesn't create an further foot ((5)b.). The addition of two single syllable suffixes adds enough material for another foot ((5)c.).

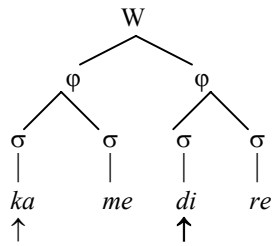
(5) a. *kame* 'hand, arm':



b. *kame-di* 'their hands/arms':

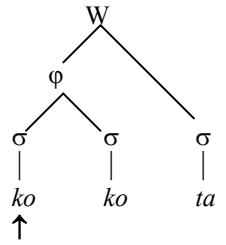


c. *kame-di-re* 'those hands/arms of theirs':

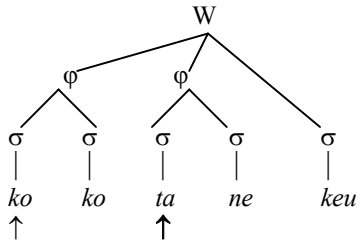


A three syllable root with a suffix (or here enclitic) also creates a larger domain generating an additional foot. (Note: in (6)b. regular glide formation generates the monosyllabic and monomoraic surface final syllable /kju/.

(6) a. *kokota* 'place name':

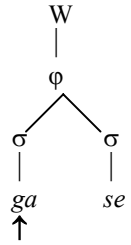


b. *kokota-nekeu* '…Kokota, it was thus':

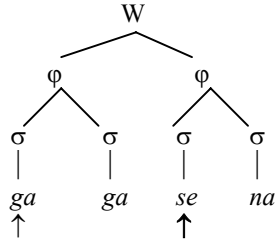


A single syllable prefix and single syllable suffix conspire to also create a larger domain generating two feet:

(7) a. *gase* 'woman':



b. *ga-gase-na* 'female (of animals)':



11 Stress assignment on disyllabic roots with light first syllable and heavy second syllable

Citation forms for 22 non-loan historically monomorphemic roots consisting of 2 syllables, where the first syllable is light and the second heavy, were elicited from four speakers ranging in age from 17 to 70. Of these 22 roots:

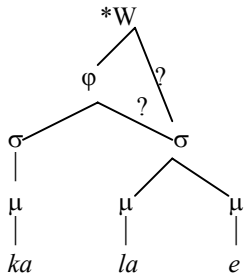
3 (13.6%) were assigned stress on the 1st syllable by all four subjects.
2 (9.1%) were assigned stress on the 2nd syllable by all four subjects.
17 (77.3%) were assigned stress on the 1st syllable by some subjects and on the 2nd by others.

With the roots assigned stress variably, younger speakers stress the first, light, syllable, while older speakers stress the second, heavy, syllable.

11.1 Disallowed syllable splitting with moraic trochees

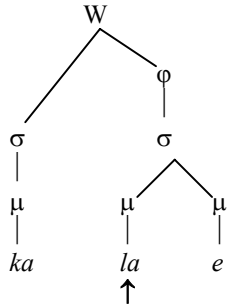
With moraic trochees if the first and second moras are assigned to a left-aligned foot in a root with a heavy second syllable, the foot boundary occurs between the two mora of the heavy syllable, splitting the syllable. This cannot occur.

(8)

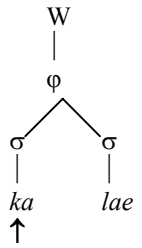


11.2 Actual stress assignment

(9) a. Older speakers (moraic trochees):



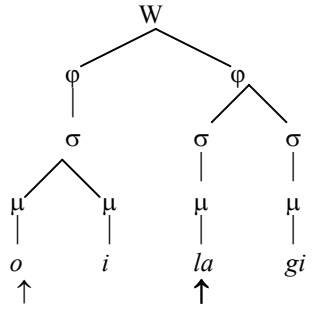
b. Younger speakers (syllabic trochees):



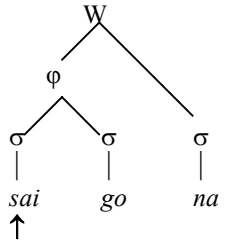
12 Other root types with heavy syllables

12.1 Three syllables, heavy first syllable

(10) a. Moraic trochees:

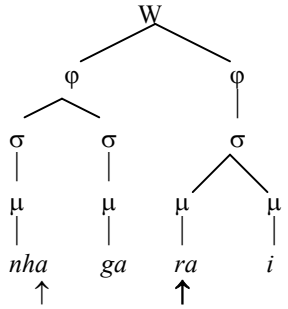


b. Syllabic trochees:

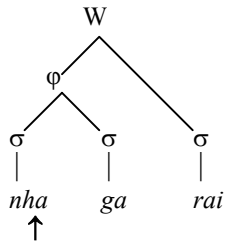


12.2 Three syllables, heavy third syllable

(11) a. Older speakers (moraic trochees):

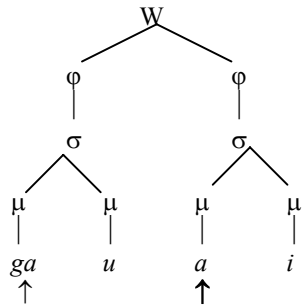


b. Younger speakers (syllabic trochees):

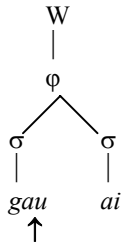


12.3 Two syllables, both heavy

(12) a. Older speakers (moraic trochees):



b. Younger speakers (syllabic trochees):



13 Summary

Regular stress regime:

- Stress is in Kokota is trochaic (stress is assigned to the left hand mora or syllable of each foot).
- Moras or syllables are assigned to feet from left to right (feet are aligned with the left margin of the word).
- The rightmost foot is the head foot (primary stress is assigned to the trochee of the rightmost foot in the word).

Synchronic variation results from three factors:

- Some roots display the prosodic shadow of lost morphological complexity and are consequently stressed irregularly.
- Irregularly stressed roots are in the process of being gradually regularised.
- The overall basis of the language's stress assignment regime is changing from moraic trochees to syllabic trochees.

References

Ama, Drummond, and Matthew Fitzsimons, 1985, *Zabana. A dictionary of the Zabana language. Santa Isabel, Solomon Islands.* Honiara: Solomon Islands Translation Advisory Group.

Crowley, Terry, 1998, *An Erromangan (Sye) grammar*. *Oceanic Linguistics* Special Publication no. 27. Honolulu: University of Hawai'i Press.

Fitzsimons, Matthew, 1989, *Zabana. A grammar of a Solomon Islands language.* MA dissertation: University of Auckland.

Hayes, Bruce, 1995, *Metrical stress theory. Principles and case studies.* Chicago: University of Chicago Press.

Jauncey, Dorothy, 1997, *A grammar of Tamambo, the languages of western Malo, Vanuatu.* PhD dissertation: Australian National University.

Lynch, John, 2000, 'Reconstructing Proto-Oceanic stress.' *Oceanic Linguistics.* 39/1:53-82

Lynch, John, and Arthur Capell, 1983, 'Sie grammar outline.' In John Lynch (ed), *Studies in the languages of Erromango.* Canberra: Pacific Linguistics.

Lynch, John, Malcolm D. Ross & Terry Crowley (eds), 2002, *The Oceanic languages.* London: Curzon Press.

Palmer, Bill, 1999a, *A grammar of the Kokota language, Santa Isabel, Solomon Islands.* PhD dissertation: University of Sydney.

----1999b, 'Voiceless sonorants – Phonemes or underlying clusters?' *Australian Journal of Linguistics.* 19/1:77-88

----2002, 'Kokota.' In Lynch et. al. pp498-524.

----f.c., *Kokota grammar*. *Oceanic Linguistics* Special Publication no. 31. Honolulu: University of Hawai'i Press.

Rehg, Kenneth L., 1993, 'Proto-Micronesian prosody.' In Jerold A. Edmondson and Kenneth J. Gregerson (ed) *Tonality in Austronesian languages. Oceanic Linguistics* Special Publication no. 24. Honolulu: University of Hawai'i Press. pp25-46.

Ross, Malcolm D, 1988, *Proto Oceanic and the Austronesian languages of western Melanesia.* Canberra: Pacific Linguistics.

----2002, 'Internal subgrouping.' In Lynch et al. pp92-120.

Tryon, Darrell T. & Brian D. Hackman, 1983, *Solomon Islands languages: an internal classification.* Canberra: Pacific Linguistics.

Orthography

All letters have their IPA value except:

g /ɣ/ *ḡ* /g/ *n̄* /ŋ/ *r* /ɾ/

Digraphs of a sonorant followed by *h* represent voiceless sonorants (Palmer 1999b):

mh /m̥/ *nh* /n̥/ *n̄h* /ŋ̊/ *rh* /ɾ̥/ *lh* /l̥/