

Split prosody and creole simplicity

The case of Saramaccan

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Abstract

Saramaccan, an Atlantic creole whose lexifier languages are Portuguese and English, has a “split” prosodic system wherein the majority of its words are marked for pitch accent but an important minority are marked for tone. Split prosody is typologically unusual and runs counter to McWhorter’s (2001a) idea that creole languages should have “simpler” grammars than non-creole languages. However, this complication of Saramaccan grammar does appear to be broadly consistent with the more general claim of McWhorter (1998) that creoles form an identifiable class of languages on typological, in addition to sociohistorical, grounds.

0. Introduction

Good (2004) provides evidence that Saramaccan, an Atlantic creole spoken in Suriname whose lexifier languages are Portuguese and English (Smith 1987, Bakker 1997), has a split prosodic system wherein the majority of its words are specified as being marked for pitch accent but a significant minority are marked for tone. Since no such split prosody has been reported for any other language, the data and analysis in Good (2004) pose important questions with respect to theories of creole typology and, in particular, might be able to shed light on the debate as

to whether or not there is a coherent typological profile to creoles which accompanies their common sociohistorical profile.¹

This paper attempts to establish some of the implications of Saramaccan split prosody for creole typology by specifically addressing whether or not it is consistent with McWhorter's (2001a) proposal that creoles should have "simpler" grammars than non-creoles. It will be argued that this split presents a strong challenge to this proposal, at least with respect to creole phonology. However, the Saramaccan facts would seem to be broadly consistent with the more general proposal of McWhorter (1998) that creoles form a well-defined typological class, in addition to a well-defined sociohistorical one.

In section 2, I give an overview of split prosody in Saramaccan. In section 3, I discuss how the Saramaccan facts relate to the idea of "simplicity" in creole grammar. In section 3, I look at the question of whether or not Saramaccan split prosody can be considered specifically "creole", if not necessarily "simple". Finally, in section 4, I offer a brief conclusion to the paper.

1. A brief overview of split prosody in Saramaccan

1.1. *Tone, accent, pitch accent, and stress*

In this section, I will discuss data from Saramaccan which indicates that the language has split prosody, wherein the majority of its words are marked for pitch accent but an important minority are marked for tone. Since understanding the arguments to be presented will crucially rely on the sense in which I use the terms *tone*, *accent*, *pitch accent*, and *stress*, I give definitions of the terms, as understood here, in (1). (For further discussion of these terms, see Hyman (1978), Beckman (1986), and Remijsen (2001:39–41, 2002:585–7).)

- (1) a. **Tone:** The linguistic use of pitch to mark paradigmatic contrasts—that is, one toneme must contrast with other tonemes that can appear within the same domain.
- b. **Accent:** An abstract marking of linguistic prominence on a syllable distinguishing that syllable from other syllables within a word—hence, a marking of syntagmatic contrast within the word.

¹ I would like to thank the audience at the workshop on the Typology of Tone and Intonation in Cascais, Portugal 1–3 April, 2004 for their contributions to this paper. I would also like to give special thanks to my principal consultants.

c. **Pitch accent:** The realization of accent as a specific tone (contour) which is placed with reference to an accented unit. (This is termed non-stress accent by Beckman (1986).)

d. **Stress:** The realization of accent by making primary use of acoustic parameters other than pitch—typically amplitude, duration, and segment quality. (This is termed stress accent by Beckman (1986).)

One potentially confusing issue which should be mentioned at this point is that the manifestation of pitch accent is taken to be a *tone* contour. In the Saramaccan case, the tone contour analyzed as being associated with a pitch accent will be a simple high tone. Thus, in the discussion, even words taken to be marked for pitch accent will be described as surfacing with a high “tone”. The distinction between a “true” high tone and a pitch accent high tone is not a surface one. Rather, it relates to their lexical status. Pitch accent high tones are a surface realization of underlying accent; true high tones are specified directly in the lexicon itself.

In the rest of this section, I will give a summary of the evidence for a split prosodic system in Saramaccan. In section 1.2, I will discuss the probable origins of the split, in order to put the data in historical context. In section 1.3, I discuss the evidence for a three-way contrast among tone bearing units (TBU’s) underlyingly in Saramaccan.² This contrast factors crucially in understanding the language’s split prosody. In section 1.5, I discuss the properties of words which appear to be marked for pitch accent, and in 1.5, I discuss the properties of words which appear to be marked for true tone. In 1.6, I briefly compare these two classes of words in order to make clear the nature of the claim that the Saramaccan lexicon exhibits split prosody. A more complete discussion of many of the arguments to be given here can be found in Good (2004).

1.2. On the origins of the split

The most likely explanation for the origins of split prosody in Saramaccan is that the language is exhibiting a logically possible (but otherwise unattested) contact effect between African tone languages and European accent languages. Rather than “levelling” its lexicon towards an African type or a European type, Saramaccan appears to have, instead, maintained two parallel prosodic systems, one with “African” tonal characteristics and another with “European” accentual characteristics.

Some evidence for this historical scenario comes from the fact that, as pointed out by Ham (1999:55), in transferred words of European origin, a high “tone”

² In Saramaccan any vocalic mora can be a TBU.

(which will, ultimately, be analyzed as being a reflex of pitch accent) in the citation form of Saramaccan words tends to correspond to the nucleus of the stressed syllable in the relevant European language, with an additional, predictable complication that an antepenultimate high tone will spread to the penultimate vowel, which in many cases is historically epenthetic. Relevant examples are given in table 1.³ As will be discussed in section 1.3, the non-high TBU's of words of European origin are typically unspecified for tone underlyingly. These TBU's surface with either high or low tones predictably depending on their phrasal environment.

Table I: *Some Saramaccan words of European origin*

SARAMACCAN	GLOSS	ORIGIN	
náki	'hit'	< English	knock
kulé	'run'	< Portuguese	correr
sipéi	'mirror'	<Portuguese	espelho
síkísi	'six'	< English	six
wólúku	'cloud'	< Dutch	wolk
minísítí	'minister'	< Dutch	minister
amɛɛkán	'American'	< Dutch	Amerikaan

There are exceptions to these generalizations. For example, following the pattern exemplified table I, the word *àki* 'here', from Portuguese *aqui*, would be expected to have been transferred into Saramaccan as *aki* with its first TBU unspecified for tone. However, the word *àki* is instead lexically fully marked for tone with its first TBU invariably surfacing as a low tone. Nevertheless, the fact that there is a strong correlation between accent in European languages and what will be analyzed as pitch accent in Saramaccan strongly indicates that accent entered the language via transfer from European languages.

Though the case is more tenuous because of the lack of sufficient data, there is some indication that words which will be analyzed as tonal tend to be of African origin, giving us evidence that the existence of the tonal part of the Saramaccan lexicon has its roots in transfer of African prosodic systems. Daeleman (1972:2), for example, notes a correlation between words which invariably surface with all low tones in Saramaccan and comparable words in Kongo. Examples, taken from Daeleman (1972), are given in table II.

³ Throughout the paper, the following conventions will be maintained: an acute accent (´) will be used to mark a high tone, a grave (`) will be used to mark low tone, and an IPA stress mark (ˈ) will be used to mark stress. Surface forms will be completely tone marked. Underlying forms, however, will only show the tone marking which is taken to be specified upon entry into the phrasal phonology. Orthographic *ng* is a velar nasal and other "coda" *n*'s indicate nasalization on the preceding vowel.

Table II: *Some Saramaccan words of Kongo origin*

SARAMACCAN	GLOSS	ORIGIN	
pùkùsù	‘bat’	< Kongo	lu-mpukusu
bàndjà	‘side’	< Kongo	mbaansya
mbàlù	‘(wood) chips’	< Kongo	mbalu
mâtùtù	‘small rat’	< Kongo	ma-tutu (pl.)

As Daeleman (1972:5) points out, there is not always complete correspondence between Kongo tones and Saramaccan tones. So, the story is more complicated than simply stating that “tonal” words in Saramaccan have their tones as a result of direct transfer from an African language. Nevertheless, the data in tables I and II gives us initial evidence, at least, that the split to be presented as one between tonal and accentual words in the Saramaccan lexicon is, broadly speaking, the result of transfer of both African tonal systems and European accentual systems into the language without levelling of the prosodic structure of words in favor of one system over the other.

In the next section, I will discuss the distribution of tones on tone bearing units (TBU’s) in Saramaccan, arguing, in particular, for a distinction between TBU’s which are lexically specified for low tone and those which are underlyingly unspecified for tone but surface with low tones as a default. This distinction will play an important role in understanding the nature of split prosody in Saramaccan.

1.3. *The three underlying types of tone-bearing units in Saramaccan*

There is a three-way contrast among tone bearing units (TBU’s) in Saramaccan with respect to their tone marking: some invariably surface with a high tone, some invariably surface with a low tone, and a final group appears to be unmarked for tone insofar as they predictably surface with a high or low tone depending on their phonosyntactic environment.⁴

By default—for example, in citation forms—TBU’s unspecified for tone surface with a low tone. However, when flanked by high tones in well-defined syntactic contexts, these TBU’s surface with high tones as part of a process of high-tone plateauing. The examples given in (2) illustrate how the surfacing tone of an unspecified TBU can alternate.

⁴ Not discussed in this paper are intonational processes which can affect the realization of the tones in a sentence, in particular, the realization of final tones. See Rountree (1972a:308–314) for discussion of a number of intonational patterns found in Saramaccan.

- (2) a. *taánga* → *tààngà* ‘strong’
- b. *dí taánga wómi* → *dí tààngá wómi*
 the strong man
 “the strong man”

In (2a), the word *taánga* ‘strong’ is seen in its citation form outside of a phrase. As indicated in the example, the surfacing form of the word in this context is *tààngà*, where the first and last TBU’s surface with low tones—these two TBU’s are underlyingly unspecified for tone. In (2b), the word *taánga* appears in a noun phrase, and it surfaces with a final high tone as *tààngá*. The appearance of this high tone is the result of high-tone plateauing between a noun and a word preceding it within the noun phrase. While the first TBU in *taánga* is also flanked by high tones and is unspecified for tone, it is not affected by plateauing because, even though the appropriate phonological environment is found, it is not within an appropriate syntactic environment for the process. For detailed discussion on the syntactic environments in which plateauing occurs, see Good (2004:597–615). Roughly speaking, heads of phrases (including verbs as heads of their sentences) plateau with preceding words which are part of their phrase, and, in other environments, plateauing is blocked. Thus, the head of the noun phrase in (2b), *wómi* ‘man’, can form a plateauing environment with a preceding adjective but the adjective *taánga* does not form a plateauing environment with a preceding article.

A word like *taánga* can be usefully contrasted with a word like *káimà* ‘alligator’. The citation form of this word also contains some high tones and low tones. However, unlike *taánga*, the low tones in the citation form of *káimà* never appear as high—that is, they are not unspecified for tone but are, instead, true low-tone TBU’s. The examples in (3) show *káimà* contrasting with the word *wómi* ‘man’, whose final TBU (like that of *taánga*) is lexically unspecified for tone.

- (3) a. *Dí káimà kulé àlá.* → *Díkáimà kùlé àlá.*
 the alligator run there
 “The alligator runs there.” (Rountree 1972a:316)
- b. *Dí wómi kulé àlá.* → *Díwómí kùlé àlá.*
 the man run there
 “The man runs there.”

The last word of a subject noun phrase forms a plateauing environment with a following verb. Thus, the unspecified final TBU of *wómi* and the unspecified initial TBU of *kulé* ‘run’ both surface with high tones, as a result of plateauing, in (3b). However, in the same basic environment, the final two TBU’s of *káimà* surface as low reflecting the fact that they are lexically specified with low tones

and, therefore, are never affected by plateauing. In addition, the final low-tone TBU's of *káimà* block the possibility that high-tone plateauing could affect the word *kulé*. Thus, unlike in the sentence in (3b), in (3a), *kulé* surfaces with an initial low-tone TBU.

The differing behavior of these two classes of TBU's with respect to plateauing constitutes the primary evidence for positing a lexical distinction between TBU's unspecified for tone and true low-tone TBU's. Further evidence for this distinction comes from the realization of the agentive suffix *-ma* in Saramaccan. This suffix surfaces with a low tone after high-tone TBU's and TBU's unspecified for tone but surfaces with a high tone after true low-tone TBU's, as seen in table III.

Table III: *Words with the agentive suffix in Saramaccan*

WORD	TONE	GLOSS	ROOT	GLOSS
lúkumà	HØL	'spectator'	lúku	'look'
koósumà	ØHØL	'woman'	koósu	'skirt'
paímà	ØHL	'mother of many children'	paí	'give birth'
lëgëdëmá	LLLH	'liar'	lëgëdë	'lie'
káimámá	HLLH	'alligator man'	káimà	'alligator'

The words in the first half of table III end in either a high-tone TBU or a TBU unspecified for tone and take the low-tone variant of the agentive suffix. The words in the second half of the table end in a true low-tone TBU and take the high-tone variant of the suffix. The second TBU of a word like *lúkumà* spectator, which is underlying unspecified for tone, will, in fact, surface with a low tone. However, it is only lexically-specified, not surface, low tones which trigger the appearance of high-tone *-ma*. Thus, this suffix provides further evidence for a phonological contrast between true low-tone TBU's and TBU's unspecified for tone.

Having discussed the three-way distinction among TBU's in Saramaccan with respect to their tone marking, in the next two sections, I will discuss each of the two major prosodic classes of words in the language: those which appear to be marked for pitch accent and those which appear to be marked for true tone. Since, descriptively, these two classes correspond respectively to the class of words containing TBU's unspecified for tone and to the class of words containing only invariant high or low tones, I will often refer to them as such in order not to presuppose the idea that the Saramaccan lexicon contains a tonal half and accentual half. In section 1.6, I will summarize the ways these two classes of words differ in the language in order to firmly establish the logic behind the claim that the Saramaccan lexicon exhibits such split prosody.

1.4. Words with unspecified TBU's as being marked for pitch accent

While there is fairly good evidence for a three-way distinction among TBU's in Saramaccan—high tone, low tone, and unspecified for tone—an important fact about the language is that there are many gaps in the logical possibilities for the combinations of these three TBU types. For example, table IV gives all the common patterns for words containing TBU's unspecified for tone. The majority of words in the language conform to one of the patterns exemplified in table IV.

Table IV: *Common patterns of words with unspecified TBU's*

WORD	TONES	GLOSS
foló	ØH	'flower'
náki	HØ	'hit'
sikífi	ØHØ	'write'
mɔkísá	ØØH	'screen, sift'
íngísi	HHØ	'English'
afokáti	ØØHØ	'lawyer'
minísíti	ØHHØ	'minister'
alukutú	ØØØH	'soursop (fruit)'

One of the most noteworthy restrictions on words with TBU's unspecified for tone, which comes out clearly from table IV, is that they never also contain TBU's specified for low tones.⁵ Another restriction is that, generally, words of this type only surface with one high-tone TBU in their citation form, with the only common exceptions to this generalization falling into a well-defined class of words with adjacent high-tone TBU's in their antepenultimate and penultimate syllables. A final restriction, which will prove relevant below, is the lack of words showing contours along the lines of (Ø)HØØ.

As discussed in detail in Good (2004), the distribution of high tones in these words is more characteristic of a pitch accent system of word-level prosody than of a true tone system. The critical feature which makes them appear to be part of an accentual system, rather than a tonal one, is the fact that the distribution of their tonal patterns can be analyzed with one lexical "mark" per word. In an ideal tone system, by contrast, no such "one-mark-per-word" bias would be expected—rather, each TBU would require its own independent tonal specification.

⁵ I have identified only one monomorphemic word containing both a lexical low tone and a TBU unspecified for tone, *anákitá* 'biting ant' which has the tonal form ØHLH. Voorhoeve (1961:154) identifies about ten words (out of a sample of 1500 words) which follow a similar pattern—an initial TBU unspecified for tone with lexical low tone in some other position in the word. All but one of the words he gives begin with a like *anákitá*, and the one exception to this, *obilògbén* 'a type of snake', also begins with a vowel.

To understand better how a pitch accent analysis could straightforwardly account for the tonal distributions found in words containing TBU's lexically unspecified for tone, it is first useful to group the major tone patterns seen in table IV with respect to schematic CV structures, which is done in (4).

- (4) **2-σ words:** C[́]V[́]CV CVCV[́]
3-σ words: C[́]V[́]C[́]V[́]CV CVCV[́]CV CVCVCV[́]
4-σ words: CVC[́]V[́]C[́]V[́]CV CVCVC[́]V[́]CV CVCVCVCV[́]

In (5) the words from table IV exemplifying the patterns in (4) are given.

- (5) **2-σ words:** náki foló
3-σ words: íngísi sikífi mɔkísá
4-σ words: minísíti afokáti alukutú

As just mentioned, the restricted possibilities for the tonal patterns in words containing TBU's unspecified for tone allows for a “one-mark-per-word” analysis wherein the specification of one TBU in a word for prominence allows us to predict the distribution of tones in the word. The location of the necessary prominence “mark”, with respect to the CV schematization seen in (4), is given in (6), where an underlined vowel indicates some lexically-specified abstract phonological prominence—that is, the location of the word's accent.

- (6) **2-σ words:** CVCV CVCV
3-σ words: CVCVCV CVCVCV CVCVCV
4-σ words: CVCVCVCV CVCVCVCV CVCVCVCV

The tone patterns on words with TBU's unspecified for tone is completely predictable from the position of the accent marks given in the schematized word structures in (6). In the majority of cases, the relationship between accent-marking and tonal realization is trivial—a TBU marked for prominence simply surfaces with a high tone, and all of its other TBU's remain unspecified for tone until they enter into the phrasal phonology.

However, the relationship is not always so simple. In words with a prominence mark in antepenultimate position, a high tone is realized on both the antepenultimate and penultimate TBU. If there were a class of words showing contours like (Ø)HØØ in Saramaccan, this analysis of words with (Ø)HHØ as showing the reflex of antepenultimate prominence would be problematic. However, a conspicuous lack of (Ø)HØØ contours in the language's words makes such an analysis straightforward.

Given the analysis of words with TBU's unspecified for tone just sketched, we can characterize the appearance of a pitch accent on these words as in (7).

- (7)
- a. The tonal melody associated with pitch accent is a high tone.
 - b. The high tone is associated with the accented TBU.
 - c. If the accented TBU is antepenultimate, the high tone spreads to the penultimate TBU.
 - d. Any TBU's not associated with a high tone will be assigned their tone phrasally (either via tonal plateauing or default low-tone assignment).

A final descriptive fact about words with TBU's unspecified for tones which bears mentioning is that they also show effects associated with stress and the placement of stress is predictable from the placement of pitch accent, which indicates they are both functioning within the same accentual system. As noted above in (1), both pitch accent and stress have been understood to be phonological realizations of the prominence associated with accent marking.

The most notable phonological effects which can be associated with stress in Saramaccan are high-vowel syncope in fast speech, which has been observed to affect vowels in unstressed syllables which are in TVs or sVT sequences (where T is an unvoiced stop), and emphatic vowel lengthening, which can affect vowels in stressed syllables. Examples of high-vowel syncope are given in (8), and examples of emphatic lengthening are given in (9). In emphatically lengthened vowels surfacing with a high tone, the tone is realized over the entire length of the vowel.

(8) **High-vowel syncope in unstressed syllables**

- a. mɔkɪsá → mɔksá 'squash'
- b. minɪsíti → minɪsti 'minister'

(9) **Emphatic vowel lengthening in stressed syllables**

- b. sákása → sá:kása 'living room'
- c. minɪsíti → minɪ:síti 'minister'

In addition to these relatively clear phonological effects sensitive to whether or not a syllable is stressed, stressed syllables are also perceptually more prominent than unstressed syllables, as would be expected.

In (10), I schematize the attested patterns of stress and pitch accent for words with short syllables, and, in (11), I give words which exemplify those patterns, taken from table IV. Crucially, there are only as many patterns of stress and pitch accent as there are pitch accent patterns themselves—clearly indicating that stress and pitch accent are not independent from one another phonologically.

- (4) **2-σ words:** 'CVCV CV'CV
3-σ words: 'CVCVCV CV'CVCV 'CVCVCV'
4-σ words: CV'CVVCV 'CVCVCVCV CV'CVVCV'
- (5) **2-σ words:** ' náki fo' ló
3-σ words: ' íngisi si' kífí ' mǝkísá
4-σ words: mi' nísítí ' afokáti a' lukutú

The correlation between pitch accent and stress is not completely trivial—that is, it is not simply the case that the stressed syllable is the same as the syllable containing the vowel marked with a high tone. However, it is predictable and, as discussed in Good (2004:588–592), can be straightforwardly analyzed using an algorithm that (i) parses words marked for accent into trochaic feet based on the position of the lexically-specified accent mark and (ii) assigns stress to the leftmost trochaic foot (with the result that stress is always found near the beginning of the word even if accent is not).

This correlation between stress and pitch accent strongly indicates that, rather than being independent phonological phenomena in Saramaccan, they are both surface reflexes of the same accent marking. I take this as a further support for the accentual analysis of these words since such an analysis can not only account for their surfacing tonal patterns but also their stress patterns.

Having discussed the characteristics of words containing TBU's unspecified for tone which argue that they should be analyzed as being marked for pitch accent, in section 1.5, I will discuss the characteristics of words which I analyze as being fully marked for tone.⁶

⁶ The discussion in this section did not include examples of the tone patterns in words with TBU's unspecified for tone which also contained long vowels or diphthongs. As discussed in Good (2004:584), words with long vowels and diphthongs can unproblematically be analyzed as being marked for pitch accent using essentially the same analysis given here for words with only short vowels.

1.5. Words with TBU's showing invariant tones as being marked for tone

While the majority of words in Saramaccan conform to one of the patterns seen in table IV (perhaps around ninety percent or so—though no thorough count has been made), there is an important subclass of words which deviate from these patterns. These words do not show any obvious restrictions on their tone patterns except for the fact that they contain no TBU's unspecified for tone and, therefore, always surface with invariant tones (except in the case of utterance-final high tones which are lowered). They can contain all high tones, all low tones, or a mix of high and low tones. Examples are given table V.

Table V: *Tone patterns for words with invariant tones*

STONE TYPE	WORD	TONES	GLOSS
All High	dón	H	'dumb, stupid'
	kódó	HH	'continually, 'forever'
	búúú	HHH	'ideophone for 'covering'
All Low	bà	L	'carry (liquid)'
	bḍsḍ	LL	'loosen'
	lègèdè	LLL	'lie'
Mixed	àkí	LH	'here'
	kàimá	HLL	'alligator'
	tótómbòtí	HHLH	'woodpecker'
	sésègùùsé	HLLH	'type of fish'

Unlike the words in table IV, these words would appear to be marked for true tone. Their TBU's exhibit a lexical contrast between both high tones and low tones, and their range of possible tonal patterns makes it impossible to analyze them as appearing as the reflex of some type of word-level accent. In addition, these words can exhibit paradigmatic tonal oppositions where two lexical items can differ solely on the basis of tone. This can be seen in minimal pairs like *tù* 'also' and *tú* 'two' and comes through especially clearly in the opposition between emphatic and non-emphatic pronouns, which are given in table VI. Five of the six pairs of forms in the two paradigms differ solely on the basis of tone where the non-emphatic form has a low tone and the emphatic form a high tone. The third singular pronouns differ on the basis of both their tones and their segmental form.

Table VI: *Emphatic and non-emphatic pronouns in Saramaccan*

PER	NON-EMPHATIC		EMPHATIC	
	SG	PL	SG	PL
1st	mì	ù	mí	ú
2nd	ì	ùn	í	ún
3rd	à	dè	hén	dé

An additional relevant fact about words which have invariant tones is that they have not been observed to show any effects which could be associated with stress. For example, the word *pìkùsù* ‘bat’ despite containing a medial TVs sequence cannot undergo high-vowel syncope (as discussed with reference to the examples in (8)) and surface as **pùksù*. These words, thus, not only seem to be lexically specified for tone, they also do not give any indication of being marked for any kind of accent at all.

In the next section, I will summarize the discussion of the previous two sections in order to clearly establish the logic behind the claim that the Saramaccan lexicon exhibits split prosody.

1.6. Comparing the two classes of words in the Saramaccan lexicon

In the previous two sections, the different phonological properties of two classes of words in Saramaccan were discussed. The first class of words was those which contained TBU’s unspecified for tone and which were analyzed as being marked for pitch accent. The second class of words were those surfacing with invariant tones which were analyzed as being marked for tone. The characteristics of each class of words are contrasted below, in (12), which summarizes the properties of words with TBU’s unspecified for tone, and in (13), which summarizes the properties of words with invariant tones.

(12) Summary of properties of words with TBU’s unspecified for tone

- a. They are only associated with one surface tone contour, a high tone (predictably spread over two syllables in some environments).
- b. Surface tone placement can be analyzed with “one mark per word” in the lexicon.
- c. They exhibit phonological effects which are associated with stress, and the relationship between stress and surface tones is predictable.

(13) **Summary of properties of words with invariant tones**

- a. They exhibit a clear H/L opposition and a wide range of tonal contours.
- b. Tones in these words can contrast paradigmatically, resulting in minimal pairs differing solely on the basis of tone.
- c. They show no phonological effects associated with stress.

The different properties of the two classes of words, as summarized in (12) and (13), clearly indicate that there is some split in the Saramaccan lexicon putting words into two distinct prosodic classes. Since each class, examined on its own, corresponds to a well-attested type of word-level prosodic system, a pitch-accent system in one case and a tone system in the other case, this split has been characterized along those lines here. Furthermore, as we saw in section 1.2, this characterization of the split is also consistent with the historical origins of Saramaccan as a creole with tonal African substrates and accentual European superstrates. To the best of my knowledge, no other language has been reported as exhibiting split prosody similar to what has been seen here for Saramaccan.

A final important point regarding Saramaccan split prosody which has not yet been explicitly made is that, while there may be useful diachronic generalizations which can explain why a particular word is accentual or tonal, synchronically, it is not possible to predict whether a word will be in one class or the other. The noun *káimà* ‘alligator’, for example, is a tonal word, while the noun *wajamáka* ‘green iguana’ is accentual. Similarly, the verb *lɛ̀gɛ̀dɛ̀* ‘lie’ is a tonal word, while the verb *fufiú* ‘steal’ is not. Furthermore, pairs of words with the same segmental phonology can be in different prosodic classes, for example *bɔ̀sɔ̀* ‘loosen’ is tonal while *bɔ̀sɔ̀* ‘brush’ is accentual. The presence of a word in the accentual class or the tonal class is synchronically arbitrary.⁷

2. Split prosody and simplicity in creole phonology

McWhorter (2001a) has proposed that creoles can be understood to have “simpler” grammars than other languages. Given that Saramaccan is a creole, it would seem worthwhile here to examine McWhorter’s claims for creole simplicity with respect to Saramaccan’s typologically unusual split prosody.

Importantly, McWhorter (2001b:391–2) singles out phonology as the one area of grammar where his simplicity hypothesis is most likely to be incorrect. His

⁷ The only noteworthy exception to this that I am aware of is that ideophones always have all high or all low tones.

reasons for this seem to be mostly empirical: McWhorter suggests that there are languages which are not creoles which appear to have simpler phonological inventories than many creoles (specifically citing “Polynesian and certain Southeast Asian languages”). And, in fact, a quick examination of Saramaccan’s segment inventory, while not necessarily appearing to be particularly complex, certainly does not reveal the language to be especially simple. The Saramaccan phoneme inventory, based on Voorhoeve (1961:147), is given in table VII (the transcriptions follow the orthographic conventions used in this paper). In addition, vowels in Saramaccan can be long or short and nasalized, adding further levels of distinctiveness to the system and, as we have seen, Saramaccan also has contrastive tone and/or accent.

Table VII: *Saramaccan phoneme inventory*

consonants					vowels	
p	t	tj	k	kp	i	u
b	d	dj	g	gb	e	o
mb	nd	ndj			ɛ	ɔ
m	n	nj	ng		a	
f	s			h		
	v	z				
w	l	j				

Gil (2001:340–3) points out a number of ways in which the Saramaccan phonemic inventory is complex, in the sense that that it contains typologically marked phonological distinctions. (Gil specifically compares Saramaccan to Riau Indonesian which, he argues, has significantly fewer typologically marked phonological oppositions and is, therefore, simpler.) A particularly striking segmental pair in Saramaccan are the labio-velars *kp* and *gb* which are a typical feature of West African languages (i.e., Saramaccan’s substrate languages) but would, in general, seem to be marked phonemes, common only in parts of Africa and in New Guinea (Ladefoged & Maddieson 1996:333). (The markedness of this phonemic distinction is also pointed out by McWhorter (2001:139).)

The presence of split prosody in Saramaccan would seem to further undermine the idea that creoles are necessarily particularly simple phonologically. The sheer rarity of split prosody certainly makes it an unlikely candidate for being labeled grammatically “simple”. Furthermore, while it is not clear that this split is especially “complicated” grammatically, it would seem to require that, in addition to all the other lexical “baggage” that accompanies words in any language (e.g., their segmental form, their semantics, and their syntactic category), the Saramaccan lexicon must also be structured in a way that encodes whether a word

is part of the accentual subsystem or part of the tonal subsystem.⁸ Clearly, this does constitute a complication to the language's grammar—and, importantly, it is of a sort not attested in any non-creole language.

In fact, this complication would seem to bear some resemblance to a grammatical feature specifically invoked by McWhorter (2001:138) as one which can render one grammar more complex than another: the presence of an arbitrary noun class system. The Saramaccan tonal/accentual split can essentially be interpreted as creating two arbitrary lexical classes of words in the language, just like noun class systems can create arbitrary lexical classes of nouns.

Of course, I do not mean to say that the Saramaccan split is the same as a noun class system. Clearly it is not. Perhaps the most important way in which it differs is that noun class systems are typically associated with a number of grammatical complications—for example, differential verb agreement or adjective concord—while the Saramaccan split is only “local” to the word itself. Nevertheless, the parallels between Saramaccan split prosody and arbitrary noun class systems are close enough that, I believe, it counts as just the sort of complication McWhorter (2001a) claims should not be found in a creole.

I should be quick to point out that I find McWhorter's arguments that creoles are less complex than non-creoles in the domain of morphosyntax quite compelling (McWhorter 2001:139–141). However, the case of Saramaccan prosody would indicate that, for whatever reason, creole phonology is not subject to the same trend towards simplicity.

Two particularly striking facts about Saramaccan split prosody are worth reiterating here: (i) a grammatical complication of this type has not been reported for any non-creole language (in section 3, I will briefly discuss some other cases of phonological lexical splits and, as we shall see, the one most closely resembling Saramaccan's is also found in a contact language) and (ii) though it can not be proven conclusively, the parameters of this split are almost certainly tied to the fact that the language is a creole with accentual superstrates and tonal substrates. In other words, in Saramaccan we seem to have a grammatical complication unique to a creole which owes its very existence to the language “mixing” central to the development of the creole in the first place.

It would seem to be the case, then, that Saramaccan split prosody requires us to refine the idea that creole phonology should be simpler than the phonology of non-creoles. It remains an open question, of course, just how complex creole phonology can be, but, in any event, it would not seem to necessarily be simple.

⁸ I leave open the question as to what the best way to analyze the nature of this encoding might be. It would not seem to require anything as drastic as a diacritic on each word marking it as “tonal” or “accentual” since, for example, such information could be recovered by knowing whether a word has lexically-specified tones or not and words in the tonal class would independently need to be specified for their tones.

However, even if we cast aside the idea that creole phonology is simple, there is another potentially interesting question which should be addressed here: Whether creole phonology—complicated or not—has a particular typological profile distinguishing it from non-creole phonology. In the next section, I will take up this question.

3. Split prosody and creole typology

While McWhorter (2001a) specifically argues that creole languages have simpler grammars than non-creoles (including in their phonology), his primary aim is not so much to show the creoles are simple as it is to solidify a broader claim of his “that creole grammars constitute a synchronically identifiable class” (McWhorter 2001:126). (This claim is most specifically defended in McWhorter (1998).) So, even if creole phonology is not necessarily simple, contrary to McWhorter’s (2001a) claims, there is still the question as to whether or not his more general argument is valid.

It does not seem possible to state with certainty that split prosody is a uniquely creole feature, since this sort of phenomenon has not been looked for extensively, and it may well exist in some non-creole language without having been documented. However, I believe evidence indicating that split prosody may, in fact, be a specifically creole feature can be found by comparing it to the “stratified” phonologies described for some non-creole languages. English, for example, has been analyzed as having multiple “levels” in its lexical phonology (see Kiparsky (1982)) attributable diachronically to extensive borrowing of Latinate vocabulary. A similar case, which is more relevant here, is that of Japanese—a pitch accent language—with a lexical strata created by extensive borrowings from Chinese—a “tone” language (Itô & Mester 1995). (Of course, the tone system of Chinese is quite different from the tone systems of the West African languages which contributed to Saramaccan’s development, and the two types should not be conflated. See Yip (1995) for an overview of East Asian tone systems including some comparison of them with African tone systems.)

Lexical strata are similar to split prosody synchronically insofar as they involve the division of lexical items into different classes based on their phonological behavior, and they are similar to it diachronically insofar as they can be the product of extensive language contact. However, lexical strata differ from split prosody in that they do not involve the maintenance of two completely distinct phonological subsystems across a major phonological parameter, like prosodic class. Rather, they involve differences in the application of different phonological rules or constraints across different classes of words. For example, the Latinate vocabulary of English has a different system for assigning accent to words than the native vocabulary does, but both classes of words realize accent in the same way (as phonological stress).

Japanese offers an especially worthwhile comparison in this context because, although Chinese borrowings have different phonological behavior than native Japanese words, it is manifestly not the case that they are part of a Chinese-like tonal subsystem. Rather, Chinese words borrowed into Japanese were integrated into the existing prosodic system without introducing a completely new type of prosodic category into the language. Chinese borrowings differ from native Japanese words, for example, in the fact they must be underlying monosyllabic and they permit sequences of a nasal followed by a voiceless stop (Itô & Mester 1995:819). While these differences between the native vocabulary and this stratum of borrowed vocabulary are noteworthy, they are qualitatively quite distinct from the prosodic split seen in Saramaccan.

I am aware of only one case of a lexical split which seems to be of more or less the same “type” as Saramaccan split prosody. This is the case of a split in the segmental inventory of Mednyj Aleut, a mixed language with major lexical contributions from Aleut and Russian. In this language, words of Aleut origin make use of a different segmental inventory than words of Russian origin Thomason (1997a:455–457).⁹ Crucially, while Mednyj Aleut has not been classified as a creole, it is classified as a contact language, specifically, it is a mixed language. (See Thomason (1997b) for a general discussion of different types of contact languages.)

Based on this, admittedly brief, comparison of Saramaccan split prosody to similar phenomena in both contact and non-contact languages, I would like to tentatively conclude that phonological “splits” like Saramaccan split prosody and Mednyj Aleut’s split phonemic inventory, are identifiable features of contact languages, if not specifically features of creoles. This conclusion is consistent with a weakened version of McWhorter (1998) where, at least from a phonological perspective, the broad class of contact languages, despite exhibiting “complications” in their phonology could still form a typological class, insofar as the kinds of complications they exhibit appear to be distinct from the sorts of complications found in non-contact languages.

Of course, there are contact languages which are well-described phonologically with no splits detected in their phonology (see, for example, Gooden’s (2003) study of Jamaican Creole). So, while phonological splits are potentially sufficient to demonstrate a given language is a contact language, it is not the case that they are a necessary feature of contact languages. Such splits, therefore, can not be used (adapting McWhorter’s (1998) phrasing) to “vindicate”

⁹ Michif is reported as having a very similar segmental split between elements of Cree origin and elements of French origin (Bakker 1997:307–312). This split differs from the Saramaccan (and Mednyj Aleut) one, however, insofar as it is closely correlated with the syntactic parameter of whether or not an element is part of the language’s nominal or verbal system.

the claim that contact languages form a typological class. However, to the extent that non-contact languages do not show such splits, this contact-language specific “complication” is consistent with that claim.

I readily admit, however, that this conclusion should be considered tentative since it is based on a lack of reported split systems, and it could very well be the case phonological splits have simply gone unnoticed in non-contact languages. In the Saramaccan case, it is worth pointing out that, while the basic phonological facts surrounding its split prosody were reported in Voorhoeve (1961), Rountree (1972a), and Rountree (1972b), the system was not immediately recognized as typologically unusual. There may, in fact, be existing descriptions of non-creole languages revealing that they have split phonologies but which have not yet been explicitly identified as such.

I would like to conclude this section by briefly addressing a final question: If split prosody is a contact feature, why has it not been reported in other creoles, especially other Atlantic creoles, which also have African substrates and European superstrates? There is, in fact, a “special” aspect of Saramaccan’s history which, I believe, is relevant to answering this question. Saramaccan is considered to be the creole that had the least contact with its superstrates after its initial formation McWhorter (1997:10–20). Considering that Saramaccan is the most “tonal” of the Atlantic creoles, a likely scenario is that, if other Atlantic creoles did once exhibit more tonal features—or even split prosody—their phonological systems have shifted towards that of their accentual superstrates due to sustained contact with them, causing them to lose some Saramaccan-like tonal features they may have once had.

If this scenario turns out to be correct, it has a potentially interesting implication for creole typology since it would indicate that Saramaccan split prosody could, in fact, be more prototypically “creole” than the non-split prosodic systems of other Atlantic creoles. This is because it implies that the Saramaccan split is a direct result of initial creole formation, while the “simpler” systems of the other Atlantic creoles are the product of later contact-induced change. Obtaining a better understanding of the development of the prosodic systems of the Atlantic creoles would, therefore, seem to be a potentially fruitful area of future research into creole typology.

4. Conclusion

In this paper, I have presented data indicating that Saramaccan exhibits a phenomenon which can be labeled split prosody where a majority of its words are marked for accent while a notable minority is marked for tone. Since a split along these lines has not been reported for any other language, it is of intrinsic typological interest. It also has consequences for proposals specific to creole

typology. In particular, it provides counterevidence to McWhorter's (2001a) proposal that creole phonology should be simple.

However, the Saramaccan data would not necessarily seem to invalidate McWhorter's (1998) more general claim that creoles form a typologically distinct class of languages. Though, as we saw in section 3, split phonology may be better considered a feature of contact languages generally rather than being specifically limited to creoles.

While I do believe that the synchronic analysis of Saramaccan presented here is more or less correct, the significance of the data for theories of creole typology must, at this point, be treated as fairly tentative. Understanding whether or not the arguments presented here in that area are correct will have to await more thorough examinations of cross-linguistic prosodic variation to determine if, in fact, phonological "splits", like Saramaccan split prosody, result only from contact language formation or if they can also develop via other pathways.

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