Draft chapters on

Saramaccan segmental phonology and prosodic phonology

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for a grammar of Saramaccan written in collaboration with John McWhorter
Segmental phonology

1.1. Segment inventory

1.1.1. Introduction

The consonant inventory of Saramaccan following the transcription system used here is given in Table 1.1, and the vowel inventory is given in Table 1.2. As will be discussed in section 1.1.3, all Saramaccan vowels can also appear with distinctive nasalization, and there is also a distinction between short and long vowels, as well as a wide range of vowel combinations. Symbols in parentheses indicate possible marginal distinctions which may be present in the language, and the relevant facts will be discussed in sections covering the phoneme preceding the parenthesized elements. The tilde indicates sounds which are in dialectal or free variation with one another. In cases where the phonetic characterization of a sound may not be obvious from its transcriptional representation, this is indicated using a broad IPA transcription in square brackets.

<table>
<thead>
<tr>
<th></th>
<th>LABIAL</th>
<th>ALVEOLAR</th>
<th>PALATAL</th>
<th>VELAR</th>
<th>LAB-VEL</th>
<th>GLOTTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>VL. STOPS</td>
<td>p</td>
<td>t</td>
<td>tj [t̪]</td>
<td>k</td>
<td>kp—kw</td>
<td></td>
</tr>
<tr>
<td>VD. STOPS</td>
<td>b (b̥)</td>
<td>d (d̥)</td>
<td>dj [d̥ʒ]</td>
<td>g</td>
<td>gb—gw</td>
<td></td>
</tr>
<tr>
<td>PRENASAL. STOPS</td>
<td>mb [m̬]</td>
<td>nd [n̬d]</td>
<td>ndj [n̬j]</td>
<td>ng [ŋ̬g]</td>
<td></td>
<td></td>
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<tr>
<td>NASALS</td>
<td>m</td>
<td>n</td>
<td>nj [nj]</td>
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<tr>
<td>VL. FRICATIVES</td>
<td>f</td>
<td>s</td>
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<td>h</td>
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<tr>
<td>VD. FRICATIVES</td>
<td>v</td>
<td>z</td>
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<tr>
<td>APPROXIMANTS</td>
<td>l</td>
<td>j</td>
<td></td>
<td>w (hw)</td>
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Table 1.1: Saramaccan consonant inventory
Table 1.2: Saramaccan vowel inventory

<table>
<thead>
<tr>
<th></th>
<th>FRONT</th>
<th>CENTRAL</th>
<th>BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>(i)</td>
<td>(u)</td>
<td></td>
</tr>
<tr>
<td>UPPER MID</td>
<td>(e)</td>
<td>(o)</td>
<td></td>
</tr>
<tr>
<td>LOWER MID</td>
<td>(\epsilon)</td>
<td>(\partial)</td>
<td></td>
</tr>
<tr>
<td>LOW</td>
<td></td>
<td>(a)</td>
<td></td>
</tr>
</tbody>
</table>

The transcription system used here differs from that used in orthographic systems that have been used for the language in two important ways. First, it represents the lower mid vowels as \(\epsilon\) and \(\partial\), instead of as \(\ddot{e}\) and \(\ddot{o}\), as found in work such as Voorhoeve (1959), or as \(\ddot{e}\) and \(\ddot{o}\), which is probably the most common convention and is typical of work produced under the auspices of SIL International (see, for example, Rountree, Asodanoe & Glock (2000)). Second it represents nasalization by means of tilde over a vowel, where orthographic systems instead use “silent” word-final or preconsonantal nasals (comparable to what is found in French orthography).

Saramaccan consonants and vowels are discussed in detail in the following two sections. The description given here is based on observations and recordings of our consultants as well as published sources, with a particular reliance on Rountree, Asodanoe & Glock’s (2000) Saramaccan–English wordlist, which, due to its availability in electronic form (see http://www.sil.org/americas/suriname/Saramaccan/English/SaramEngDictIndex.html), was quite valuable for locating minimal pairs and detecting and verifying distributional restrictions. In some cases, the recordings were informally analyzed instrumentally using Praat (Boersma & Weenink 2009), though no systematic instrumental analysis was undertaken here. Thus, phonetic aspects of the description are largely impressionistic in nature.
1.1.2. Consonants

1.1.2.1. Oral stops

The phoneme \( p \)

The Saramaccan phoneme \( p \) has a comparable phonetic realization to English \( p \), though often with less aspiration, and has no known significant distributional restrictions. Examples of words containing \( p \) include: \( \text{páa} \) ‘pair’, \( \text{peé} \) ‘play’, \( \text{píki} \) ‘answer’, \( \text{hópo} \) ‘go up’, \( \text{hípi} \) ‘pile’, and \( \text{saápu} \) ‘sharp’. Some minimal pairs for \( p \) with similar consonants include: \( \text{pái} \) ‘father-in-law’ vs. \( \text{bái} \) ‘warn’ vs. \( \text{kpái/kwái} \) ‘tree type’; and \( \text{písi} \) ‘piece’ vs. \( \text{bísi} \) ‘sand’ vs. \( \text{físi} \) ‘fish’.

The phoneme \( b \) (\( ɓ \))

Most descriptions of Saramaccan recognize only two voiced bilabial stops, a plain \( b \) and a prenasalized \( mb \). However, it has been recently noted (see Smith and Haabo (2007)) that the language also appears to make use of an implosive bilabial stop \( ɓ \) (see also the discussion of the alveolar implosive \( d \) in the section on \( d \) below). (Smith and Haabo’s (2007) claims regarding implosives are completely distinct from Voorhoeve’s (1959:440) treatment of the Saramaccan labial-velar stops as implosive.) No minimal pairs across the plain/implosive distinction have been reported rendering the phonemic status of the \( b/ɓ \) distinction unclear. The distinction has not been represented in any orthographic system for the language, and we maintain the convention of using only \( b \) here.

An attempt to elicit the distinction with two consultants based on three words in Smith & Haabo (2007), \( \text{bebé} \) ‘drink’, \( \text{bása} \) ‘bastard’, and \( \text{báta} \) ‘bottle’, suggested that the first two words contained implosive stops and the last a plain stop, though Smith & Haabo (2007) only found the
first to contain implosives. (See also the section on $d$ for a case where the distinction appeared to be found in the speech of the same two consultants but with a different distribution than what was reported in Smith & Haabo (2007).) Fully understanding the status of $b$ versus $ɓ$ will have to await more detailed lexicographic and phonetic study. Given that it is known that there is dialectal variation in the pronunciation for another class of stops, the labiovelars, it seems likely to be the case that dialectal differences are relevant here, as well, presumably explaining the variation between the forms we encountered and what was previously reported.

The phonetic realization of plain $b$ is largely comparable to English $b$, except that it is more consistently voiced, even in initial position. There are no known significant distributional restrictions on the appearance of what is transcribed here as $b$. However, further study may, of course, reveal important distributional differences between $b$ and $ɓ$.

Some minimal pairs for other consonants similar to $b/ɓ$ include: $báɪ$ ‘warn’ vs. $páɪ$ ‘father-in-law’ vs. $máɪ$ ‘mother-in-law’; $bú$ ‘beer’ vs. $pú$ ‘pick’ vs. $mbú$ ‘mill’; $bebé$ ‘drink’ vs. $gbegbé$ ‘tree type’; and the near-minimal pair $bítju$ ‘worm’ vs. $vítje$ ‘monkey type’.

**The phoneme $t$**

The Saramaccan phoneme $t$ has a comparable realization to English $t$, except with a more dental articulation and less aspiration, and has no known significant distributional restrictions. Examples of words containing $t$ include $táɪ$ ‘tie’, $túu$ ‘all’, $teemé$ ‘tremble’, $wáta$ ‘water’, and $kóto$ ‘cold’. Some minimal pairs for $t$ with similar consonants include: $ṯú$ ‘steer’ vs. $dú$ ‘dear’ vs. $sú$ ‘seed’; $těni$ ‘ten’ vs. $tjéni$ ‘cane’; and $paatí$ ‘separate’ vs. $paandí$ ‘plant’.
The phoneme \(d\) 

Most descriptions of Saramaccan recognize only two voiced alveolar stops, a plain \(d\) (with a more dental articulation than English \(d\)) and a prenasalized stop \(nd\). However, as discussed in more detail in the description of the phoneme \(b\), it has been recently argued that the language exhibits a distinction between implosive and plain stops for labials and alveolars. However, as discussed above, no minimal pairs across the plain/implosive distinction have been found for any place of articulation, rendering the phonemic status of this opposition unclear.

In the speech of our primary consultant, some recorded instances of \(d\) in the word \(de\) ‘them’ appeared to have an implosive quality while others did not. Smith and Haabo (2007:109) report this as a word with a consistently implosive pronunciation. In addition, when the words \(diśá\) ‘leave off’ and \(diíngi\) ‘drink’ (the first of which is reported to begin with an implosive stop) were elicited from two other consultants, the speakers did report a distinction in the initial sound which was consistent with impressionistic evidence and could be characterized along implosive/plain lines. At the same time, the word \(duúmi\) ‘sleep’ appeared to begin with the same sound as \(diśá\), implying it, too, contained an implosive \(d\), though this word is reported to have a plain \(d\) by Smith & Haabo (2007). As discussed above in the section on \(b\), coming to a fuller understanding of the status of either labial or alveolar implosives in the language will have to await further study. As also mentioned in the discussion of \(b/ɓ\), it is probably the case that dialectal factors are at play here.

The phonetic realization of plain \(d\) is largely comparable to English \(d\), except with a more dental articulation. It is also more consistently voiced in initial position. There are no known significant distributional restrictions on the appearance of what is transcribed here as \(d\). However, further study may, of course, reveal important distributional differences between \(d\) and \(ɗ\).
Some minimal pairs for other consonants similar to d/d include: dī ‘dear’ vs. tí ‘steer’;
dómbo ‘lump’ vs. djómbo ‘jump’; dé ‘them’ (tonic form) vs. zé ‘sea’; káda ‘snake type’ vs. kánda ‘sing’; and dúśu ‘thousand’ vs. núśu ‘nose’ vs. lúśu ‘loosen’.

The phoneme tj

The Saramaccan phoneme tj, at least for our consultants, is phonetically affricated along the lines [tʃ], with a relatively dental articulation at the beginning as compared to the English alveopalatal affricate and often with less frication than in English. It is presented here with the stops following earlier descriptions, and the transcription of this sound as tj is standard—indeed, it is found in Schumann’s 1778 word list. However, most sources say little about the phonetic interpretation of this transcription. The inventory given in Smith and Haabo (2004:529) is in accord with our own observations treating this sound as an affricate rather than a stop. However, Voorhoeve (1959:440) phonetically transcribes this sound as [c], implying that he observed it as a voiceless palatal stop (and he offered a comparable transcription for dj, as will be discussed below). In any event, all sources consistently report a single stop/affricate with palatal articulation, even if there might be phonetic variation in its realization (of unknown conditioning). As seen in Table 1.1., tj forms part of a larger palatal series parallel to the labial and alveolar series (except for the lack of any palatal fricatives). It shows no known significant distributional restrictions.

Examples of words containing tj include: tjá ‘carry’, tjiká ‘enough’, tjúba ‘rain’, and matjáu ‘axe’. Some minimal pairs for tj with similar consonants include: tjéni ‘cane’ vs. téni ‘ten’; fitjá ‘overgrown’ vs. fiká ‘remain’; and the near minimal pairs tjumá ‘burn’ vs. djulá ‘swear’ and tjúbí ‘hide’ vs. djú bée ‘immediate family’. Neither tj nor dj are among the more frequent pho-
nemes in Saramaccan, presumably explaining the difficulty in finding a true minimal pair between the two.

There are a handful of lexical doublets in Saramaccan involving alternations between $tj$ and $k$. Examples include $tjína/kína$ ‘taboo’ and $lémíki/lémítji$ ‘lime tree’. However, there is no indication that this reflects an allophonic relationship among these sounds in Saramaccan, and, at least in the second case, a ready explanation for the presence of this doublet in Saramaccan is that it reflects borrowing of variant Sranan forms, which shows free allophonic palatalization of velars before $i$ (see Smith & Haabo 2004:559).

The phoneme $dj$

Like $tj$, The Saramaccan phoneme $dj$, for our consultants is phonetically affricated to $[dʒ]$, though we present it here with the stops following earlier practice. As with $tj$, while the transcription of this phoneme as $dj$ is standard, most sources say little about its phonetic realization. Smith & Haabo (2004:529) also give its phonetic realization as an alveopalatal affricate, but Voorhoeve (1959:440) phonetically transcribes this sound as $[j]$, indicating that he observed it the sound as a voiced palatal stop. Whatever the reasons for this discrepancy, it is clear from all sources that only a single phoneme is involved, and it can be placed in a palatal series in opposition to $tj$. It shows no known significant distributional restrictions.

Examples of words containing $dj$ include $djómbo$ ‘jump’, $djái$ ‘yard’, $bódjée$ ‘sly’, and $fūdží$ ‘fry’. Some minimal pairs for $dj$ with similar consonants include: $djómbo$ ‘jump’ vs. $dómbo$ ‘lump’; $djú$ ‘Jew’ vs. $ndjú$ ‘peanut type’ (though our consultants are not familiar with this latter word); the near minimal pair $djůsu$ ‘soon’ vs. $gūůsi$ ‘wine red’; the near minimal set $kódjo$ ‘cudgel’ vs. $gogó$ ‘rear’ vs. $djodjo$ ‘rag’; and the near minimal pairs $tjumá$ ‘burn’ vs. $djulá$
‘swear’ and tjubí ‘hide’ vs. djú bée ‘immediate family’. The phoneme dj is not particularly fre-
quent in Saramaccan, presumably explaining the difficulty in finding more true minimal pairs.

Donicie & Voorhoeve (1963) give at least one dj/g doublet of the kind discussed above for
tj/k in the word djéi/géi ‘resemble’, which other sources give solely as djéi. As with tj/k alterna-
tions, while this may be the result of productive processes in Sranan, there is no evidence for any
kind of allophonic relationship between dj and g in Saramaccan.

The phoneme k

The Saramaccan phoneme k has a comparable realization to English k, though with less aspira-
tion, and no known significant distributional restrictions. Examples of words containing k in-
clude kákísa ‘skin’, ketekú ‘beads’, and kó ‘cold’. Some minimal pairs for k with similar con-
sonants include: kó ‘come’ vs. gó ‘go’; fiká ‘remain’ vs. fitjá ‘overgrown’; and kái ‘call’ vs.
kpái/kwái ‘tree type’. As discussed in the section on tj, there are a handful of lexical doublets
where k alternates with tj, but there is no evidence of a synchronic phonological relationship be-
tween the two phonemes.

The phoneme g

The Saramaccan phoneme g has a comparable realization to English g, though it seems to have
more voicing in initial position, and no known significant distributional restrictions. Unlike b and
d, no voiced velar implosives have been reported for Saramaccan. Some examples of words con-
taining g include gāá ‘big’, giú ‘stingy’, and legede ‘lie’. Some minimal pairs for g with similar con-
sonants include: gó ‘go’ vs. kó ‘come’; lági ‘inferior’ vs. lángi ‘depend’; agó ‘knot’ vs. aghó
‘leaf type’; the near minimal pair *guunsi* ‘wine red’ vs. *djúnsu* ‘soon’; and the near minimal set *gogó* ‘rear’ vs. *kódjo* ‘cudgel’ vs. *djodjo* ‘rag’.

**The phoneme *kp–kw***

Though there is variation, it appears to be the case that Saramaccan can be described as contrasting voiceless labial-velar and labialized velar stops, i.e. *kp* vs. *kw*, though there are also words where these consonants can alternate with each other and we are not aware of any minimal pairs for them, which is why they are treated together. To the extent that there may be a phonemic distinction between labial-velars and labiovelars as well as an additional possible contrast between plain and implosive stops, the language would appear to have a particularly rich stop inventory.

The factors conditioning the alternation between labial-velars and labialized velars have not been thoroughly studied, but they appear to be primarily sociolinguistic and lexical, as opposed to phonological. Voorhoeve (1959:436) does not indicate the existence of this alternation at all, nor do early sources like Schumann (1778), but the former only includes *kp/gb* in the phonemic inventory of the language while the latter only transcribes *kw/gw*. Rountree (1972b) suggests that the *kp–kw* and *gb–gw* alternation is the result of allophonic free variation, and Smith & Haabo (2004:529) indicate that some dialects of the language actually distinguish between labial-velars and labialized velars while others have these two segments in free variation. Finally, Rountree and Glock (1977:68) specify that, while there is free variation between labial-velars and labialized velars in many words, there are some which only ever appear with labial-velars, with two examples for voiceless labial-velars that we have verified with two consultants being *akpó* ‘arrow type’ and *akpósokpa* ‘trowel type’. The same consultants also appeared to favor *kw* in two words that were examined which Rountree, Asodanoe & Glock (2000) indicate as showing vari-
able pronunciation, *kwái* ‘tree type’ and *kwálíki* ‘quarter’, while viewing both *kpáta* and *kwáta* ‘monkey type’ as apparently equally acceptable variants of the word and being split on the most acceptable pronunciation for *kpátíwójo/kwátíwójo* ‘opossum’ and *kpéi/kwéi* ‘square off’ (despite both being from the same village).

Coming to a fuller understanding of the nature of these alternations would clearly require a detailed sociolinguistic and lexical study, and it seems likely that some of the complications may be due to dialect mixture. In any event, while there do not appear to be any minimal pairs distinguishing labial-velars from labialized velars, the possibility that, for a given speaker, there are some words not allowing labial-velars to alternate with labialized velars suggests that the distinction is at least marginally phonemic.

While the presence of labial-velars in Saramaccan, much like the presence of prenasalized stops, can be connected to substrate influence, it is not the case that words with labial-velars have a consistently West African origin. In fact, one finds that words showing a phonetic *kw* sequence in a European source language can appear in some Saramaccan varieties with a *kp*. This is the case, for example, with the reported variation in forms like *kpéi/kwéi* ‘square off’ whose source is English *square*, *kpálíki/kwálíki* ‘quarter (coin)’ whose source is the Sranan *kwarki* of the same meaning (which, in turn, ultimately derives from Dutch *kwartje*), and *kpátíwójo/kwátíwójo* ‘opossum’ which is ultimately (though not synchronically) derived from a compound based on two Portuguese words, *quatro* ‘four’ and *olho* ‘eye’ (the exact form of the first element in the compound is not completely clear, but that it began with a *kw* sequence is secure).

Voorhoeve (1959:440) places both the voiceless and voiced labial-velars under the heading “implosive” (though transcribing them as them using labial-velar sequences). However, no other
sources use this particular label and while, impressionistically, there can be an implosive quality to the voiced labial-velar gb, this is not found for kp, and Voorhoeve’s label would not appear to reflect a contemporary usage of the term.

Some minimal pairs for kp~kw with similar consonants include (indication of kp~kw variation follows Rountree, Asodanoe & Glock (2000)):

- kpái ‘tree type’ vs. pái ‘father-in-law’
- kái ‘call’ vs. wái ‘happy’; and near minimal set akpó ‘arrow type’ vs. agba ‘chin’ vs. agbó ‘leaf type’.

In this grammar, in words which alternate in pronunciation between kp and kw, the transcription simply follows which variant form of the word was used when the relevant example was collected.

The phoneme gb~gw

For discussion of the general status of labial-velars and the alternation between labial-velars and labialized velars, see the section on kp~kw above. The same basic issues arise for understanding the alternation between the voiced pair gb~gw as the voiceless pair kp~kw. The main difference between the presence of gb~gw versus kp~kw in Saramaccan is that we have not identified any words of non-African origin with an original gw sequence appearing in Saramaccan with a gb sequence. However, this is probably due to the accidental fact that words containing gw sequences in European languages are not as frequent as words containing kw sequences, making the gw sequence less likely to have entered Saramaccan via that route.

Rountree and Glock (1977:68) give two words agbagó ‘shrub type’ and agbán ‘pot type’ as not permitting the gb~gw alternation. This pattern for these words was verified with two consultants and was also found for the word agba ‘chin’. The same speakers appeared to have gwamba
‘meat’ as the dominant form for that word, though they recognized gbamba as a possible variant, with a similar pattern for dagwé ‘snake type’ holding for one of these speakers. As with the case of comparable words containing kp, examples like these indicate that the distinction between gb and gw may be marginally phonemic, at least for some speakers.

Some near minimal pairs for gb~gw with similar consonants include (indication of gb~gw variation follows Rountree, Asodanoe & Glock (2000)): gbegú/gwegú ‘turtle’ vs. bégi ‘request’ vs. wégi ‘weigh’; and dagbé/dagwé ‘snake type’ vs. dágu ‘dog’; and agba ‘chin’ and agbó ‘leaf type’ vs. akpó ‘arrow type’. There is a relative lack of words containing gb~gw in Saramaccan, which would seem to largely explain the difficulties in finding minimal true pairs. Furthermore, many of the words containing gb are ideophones (see section 1.2.3), which we have generally excluded when looking for minimal pairs because of special phonological properties they exhibit distinguishing them from other lexical classes. This makes unclear the extent to which minimal pairs involving comparisons between ideophones and non-ideophones should be considered clear demonstrations of phonemic oppositions.

In this grammar, in words which alternate in pronunciation between gb and gw, the transcription simply follows which variant form was used when the relevant example was collected.

Rountree, Asodanoe & Glock (2000) provide two forms, séngba ‘ant type’ and sengbé ‘without handle’, containing orthographicbgcolor/ngb sequences suggesting the possibility of a prenasalized labial-velar stop. When these words were elicited from two consultants, however, variant forms sémба and sénge were produced, respectively. So, we are unable to comment on the phonetics of the variants of these words recorded by Rountree, Asodanoe & Glock (2000). However, if they did turn out to include something along the lines of a prenasalized labial-velar, this would almost certainly represent a very marginal sound in the relevant varieties, and it seems likely that
the nasals in those words are actually representing vowel nasalization rather than prenasalized labiovelars.

1.1.2.2. Plain nasals and prenasalized stops

The phoneme \( m \)

The Saramaccan phoneme \( m \) has a comparable realization to English \( m \) and no known significant distributional restrictions, except for a possible gap involving its presence before the mid tense vowels \( e \) and \( o \) and a poor attestation before or after nasalized vowels, both to be discussed below in section 1.2.3. As discussed in the section on \( mb \), for certain speakers, some of the words given as containing an \( mb \) in some sources may be realized as \( m \), in particular when \( mb \) would be expected word-initially. Some examples of words containing \( m \) include \( máta \) ‘mattress’, \( míti \) ‘meet’, and \( paamúsi \) ‘promise’. Some minimal pairs for \( m \) with similar consonants include: \( míi \) ‘child’ vs. \( mbíi \) ‘mill’ vs. \( bíi \) ‘beer’.

In limited cases, \( m \) can be syllabic. When this happens, it is always associated with vowel reduction from a full form. This is most frequently encountered with a reduced form of the first person singular tonic pronoun \( mí \) and is also found in a reduced form of \( mamá \) ‘mother’, \( m’má \), that is used in isolation as a term for address and is also found in some compounds, for example, \( m’máfóu \) ‘bush hen’ (variant of \( mamáfóu \)).

Except for a few possible exceptions discussed in section 1.2.1, there are no codas in Saramaccan, and the vast majority of instances of \( m \) that may appear to be coda consonants in practical orthographies for the language instead mark vowel nasalization before a labial onset.
The phoneme mb

Saramaccan has a series of prenasalized stops, represented orthographically here as nasal-stop sequences. They are reported as appearing both word-initially and word-medially. However, at least for our main consultant, expected morpheme-initial prenasalized stops were typically reduced to a simple nasal. It is not known if this represents an idiolectal feature or is representative more systematic dialectal variation. Given such variation, the prenasalized stop mb is perhaps best represented phonologically /m̩b/—that is, as a nasal consonant with a secondary oral stop release, though other representations are also imaginable (within previous descriptions, this representation is more consistent with Voorhoeve’s (1959:440) treatment of them as “fortis nasals” rather than the more usual characterization as prenasalized stops).

Since non-final nasalized vowels are expressed in common orthographies as a sequence of VNCV representing VCV, in principle in these orthographies a sequence like VNDV (where D represents a voiced stop) would be ambiguous between a parsing V.NDV, with a prenasalized stop, or V.DV, with a nasalized vowel. This issue was discussed by Voorhoeve (1959:439) in the first proposed orthography of the language, who was evidently not particularly concerned about the lack of means to represent the distinction because of a relatively low (if even existent) functional load. In fact, Voorhoeve (1959:439) even seems to imply the distinction is not employed to make phonemic contrasts. In principle, the transcription system used here is not ambiguous in this regard since it marks nasalization diacritically rather than via nasal consonants. However, if there is a distinction, it is possible that it may have gone unnoticed and words exhibiting the contrast could be mistranscribed. While we believe this to be unlikely, as discussed in the sections on b, d, kp−kw, and gb−gw, there are a number of cases in Saramaccan segmental phonology where there is evidence for a contrast with low functional load, meaning that, barring targeted
investigation into the issue, it would be premature to rule out the possibility entirely. See also section 1.1.3.2 on nasalized vowels for relevant discussion.

As discussed below in section 1.2.3, prenasalized stops are known to be subject to cooccurrence restrictions wherein they do not appear word-initially before the lax mid vowels $e$ and $o$. They also are not well attested before or after nasalized vowels.

Some examples of words containing $mb$ include: $mbéi$ ‘make’, $mbúi$ ‘mill’, $sembe$ ‘person’, and $kámbea$ ‘room’. Some minimal pairs for $mb$ with similar consonants include: $mbúi$ ‘mill’ vs. $búi$ ‘beer’ vs. $múi$ ‘child’; and the near minimal pair $tómbi$ ‘spill’ vs. $tóbó$ ‘great grandparent’. As can be seen by a comparison of the word $mítí$ ‘meet’, cognate with English $meet$, and $mbéti$ ‘animal’, cognate with English $meat$, the distinction between $m$ vs. $mb$ is not simply the result from direct transfer of $mb$ in lexical items from West African languages into Saramaccan.

**The phoneme $n$**

The Saramaccan phoneme $n$ has a comparable realization to English $n$, but with a more dental articulation, and no known significant distributional restrictions, except for a possible gap involving its presence before the mid tense vowels $e$ and $o$ and a poor attestation after nasalized vowels, both to be discussed below in section 1.2.3. As discussed in the section on $nd$, for certain speakers, some of the words given as containing an $nd$ in some sources may be realized as $n$, in particular when $nd$ would be expected word-initially. Some examples of words containing $n$ include: $nétí$ ‘net’, $náki$ ‘hit’, $maaní$ ‘screen’, and $kínó$ ‘film’. Some minimal pairs for $n$ with similar consonants include: $téné$ ‘tear’ vs. $tendé$ ‘stretch’; $né$ ‘name’ vs. $dé$ ‘there’; and the near minimal pairs $namá$ ‘touch’ vs. $njúma$ ‘term of address’ and $náki$ ‘hit’ vs. $ndjaká$ ‘crisscross’ (though our consultants have produced a variant pronunciation of this word with an initial $dj$
rather than \textit{ndj}). (The lack of clear minimal pairs involving palatal nasals appears to be largely due to the fact that they are not particularly common in the Saramaccan lexicon.)

Except for a few possible exceptions involving \textit{m} discussed in section 1.2.1, there are no codas in Saramaccan, and instances of \textit{n} that may appear to be coda consonants in practical orthographies for the language, in fact, mark vowel nasalization (though see 1.1.3.2 for discussion of an alternation between vowel nasalization and a final velar nasal).

\textbf{The phoneme \textit{nd}}

As discussed above in the section on \textit{mb}, Saramaccan is generally described as having a series of prenasalized stops which can appear both morpheme-initially and morpheme-internally. However, for our main consultant, expected morpheme-initial prenasalized stops were typically reduced to a nasal, thus suggesting a phonological representation of /nd\textsubscript{d}/—that is, as a nasal with a secondary stop release. Conventions used for transcribing nasals relevant to the interpretation of intervocalic \textit{nd} sequences in common Saramaccan orthographies are discussed in the section on \textit{mb}. Here, we employ a convention making use of a diacritic on a nasalized vowel, thus, in principle, avoiding issues found in these orthographies regarding ambiguous interpretation of intervocalic \textit{nd} sequences. However, if there is a distinction, it is possible that it may have gone unnoticed and words exhibiting the contrast could be mistranscribed. See the section on \textit{mb} for additional discussion.

As discussed above in reference to \textit{mb} and below in section 1.2.3, prenasalized stops do not appear word-initially before the lax mid vowels \textit{ɛ} and \textit{o} and are also not well attested before or after nasalized vowels.
Some examples of words containing *nd* include: *ndéti* ‘night’, *míndi* ‘middle’, *kendé* ‘heat’, and *déndu* ‘inside’. As indicated by the first two of these words, the presence of *nd* in Saramaccan cannot be solely attributed to transfer of words with an *nd* sequence, since both words derive from English words, neither of which contain *nd*. Some minimal pairs for *nd* with similar consonants include: *tendé* ‘stretch’ vs. *tené* ‘tear’; *béndi* ‘bend’ vs. *bédi* ‘bed’; and the near minimal pair *sendé* ‘shine’ vs. *sembé* ‘person’.

**The phoneme *nj***

The phoneme *nj* is a palatal nasal, though in Saramaccan orthographies it may be ambiguous between a palatal nasal and a nasalized vowel followed by a *j*. Its distribution is somewhat restricted, appearing primarily word-initially, as observed by Rountree and Glock (1977:40). In the few exceptional cases where it is known to appear word medially, some of the relevant words are transparently formally reduplicated with the medial instance of *nj* simply being the initial sound of the second instance of the reduplicated stem as in, for example, *njānjā* ‘food’, *njûnjû* ‘new’, and, for our consultants, *njûñjû* ‘lizard type’ (which has an alternate pronunciation with *ndj* rather than *nj*) (the exceptional status of the first two words was pointed out by Rountree and Glock (1977:40)). One other exception that we have found is the word *sipanjêlu* ‘Spanish’, and Rountree (1972b:26) also reports the word *mûnjâ* ‘wet’ as showing a medial *nj*. (This latter word is also atypical insofar as it shows a nasal consonant after a nasalized vowel, in a pattern that otherwise is uncommon—see section 1.2.3.) Even in initial position, the sound is not particularly common.

Additional examples of words containing *nj* include: *njâ* ‘eat’, *njêngî* ‘wasp type’, and *njawî* ‘lizard type’. Due to the relative infrequency of *nj*, true minimal pairs involving this phoneme are
difficult to find. Some minimal pairs and near minimal pairs for \( nj \) with similar consonants include: \( njúma \) ‘term of address’ vs. \( namá \) ‘touch’; \( njūnjū \) ‘new’ vs. \( ndjú \) ‘peanut type’ (though this second word was not known by our consultants); \( njūsu \) ‘news’ vs. \( djūsu \) ‘soon’; and \( nj̃ku \) ‘young’ vs. \( ngáku \) ‘stutter’.

Since the transcription system here marks nasalization diacritically rather than via nasal consonants, it marks the distinction between nasalized vowel followed by \( j \) versus a palatal nasal. However, due to the presence of a minor nasal harmony rule involving the palatal glide and the palatal nasal, it is possible that some instances of \( VnjV \) could have been misapprehended as \( VjV \) due to the phonetic overlap between the sequences (see section 1.1.3.2 for further discussion).

**The phoneme \( ndj \)**

The phoneme \( ndj \), a palatal prenasalized stop, is not particularly frequent in Saramaccan, though it has been long recognized as distinctive, phonologically pairing with \( nj \). As with the other prenasalized stops, our main consultant did not articulate the stop portion of \( ndj \) when in morpheme initial position. In word-medial position, the stop release was not as strongly affricated as what was found for the \( dj \) phoneme, suggesting a transcription closer to \( [n] \) than \( [ñdʒ] \), though phonologically there is no reason not to group \( dj, nj, \) and \( ndj \) into a single palatal stop series. Voorhoeve (1959:fn. 9) suggests that \( ndj \) could be analyzed as \( ndi \) preceding a vowel, specifically applying this analytical possibility to the word \( ndjú \) ‘peanut type’ and suggesting something along the lines of \( ndiú \) as a possible transcription. He opts for an analysis along the lines of \( ndj \) by appealing to a preference for an overall symmetry in Saramaccan’s phonemic system. An additional reason for choosing an analysis employing an \( ndj \) phoneme is the presence of sets of words like \( gándji \) ‘sour’ and \( faádji \) ‘menstruation’ vs. \( gandí \) ‘crocodile’ and \( gadíi \) ‘porch’ and \( dií \) ‘three’,
which seem to clearly indicate a contrast between \textit{dji} sequences and \textit{di} sequences making it difficult to treat \textit{ndj} as simply the surface reflex of \textit{ndiV}. A word \textit{didá} ‘daylight’ is particularly revealing in this regard. However, no comparable word with an \textit{ndiV} sequence was found in Rountree, Asodanoe & Glock (2000), making it impossible to unequivocally rule out Voorhoeve’s proposed alternative analysis for this sound.

Further examples of words containing \textit{ndj} include: (\textit{a})\textit{djíndja} ‘ginger’, \textit{bandja} ‘side’, \textit{bóndji} ‘cluster’, and \textit{ndjaká} ‘crisscross’ (though this last word could was preferably pronounced \textit{djaká} by consultants when checked). Some minimal pairs and near minimal pairs for \textit{ndj} with similar consonants include: \textit{mandjá} ‘stain’ vs. \textit{mandá} ‘send’; \textit{gándji} ‘sour’ vs. \textit{adjí} ‘game type’; \textit{ndjú} ‘peanut type’ vs. \textit{njúnjú} ‘new’ vs. \textit{djú} ‘Jew’ (though this first word was not known by our consultants); and \textit{miindjá} ‘urine’ vs. \textit{miingá} ‘aluminum band’.

**The phoneme \textit{ng}**

Unlike the other nasal places of articulation, there is no distinction made between a plain velar nasal and a prenasalized velar stop in Saramaccan. Rather, one finds only one velar nasal, generally written as \textit{ng} and grouped phonologically with the prenasalized stops, with typical phonetic realization representable as [ŋ]. Unlike the other prenasalized stops, our main consultant did pronounce the stop release of the velar nasal even when it was in initial position (though such words are uncommon in the language). However, in some cases, for example in the word \textit{íngísi} ‘English’, a reduction of \textit{ng} to [ŋ] was observed. Conventions used for transcribing nasals relevant to the interpretation of intervocalic \textit{nd} sequences in common Saramaccan orthographies are discussed in the section on \textit{mb}. Here, we employ a convention making use of a diacritic on a nasalized vowel, thus, in principle, avoiding issues found in these orthographies regarding ambigu-
ous interpretation of intervocalic ng sequences. However, if there is a distinction, it is possible that it may have gone unnoticed and words exhibiting the contrast could be mistranscribed. See the section on mb for further additional discussion.

Examples of words containing ng include: ngáku ‘stutter’, ngóto ‘ditch’, taánga ‘strong’, píngo ‘pig type’, dúngu ‘dark’, and zengéni ‘sway’. Some minimal pairs and near minimal pairs for ng with similar consonants include: hánga ‘hang’ vs. hága ‘pellets’; and miíngá ‘aluminum band’ vs. miindjá ‘urine’.

1.1.2.3. Fricatives

The phoneme f

The Saramaccan phoneme f has a comparable realization to English f and no known significant distributional restrictions. Some examples of words containing f are: fási ‘manner’, féífi ‘five’, and fufúu ‘steal’. Some minimal pairs for f with similar consonants include: fulá ‘spray’ vs. vulá ‘rain’ (in a secret language); the near minimal pairs háfu ‘half’ vs. avó ‘grandparent’ and fítja ‘overgrown’ vs. vítje ‘monkey type; and fáa ‘fell’ vs. sáa ‘pity’. (Due to a relative lack of words containing v, it is difficult to find clear minimal pairs between v and other phonemes. In addition to the ones listed above, Voorhoeve (1959:440) suggests a fíti hě ‘it fits him’ vs. aviti ‘drill’.)

The phoneme v

The Saramaccan phoneme v has a comparable realization to English v. It is not particularly frequently found in the language, and a fairly high proportion of words where it is found are ideophones. Some examples of words containing v are větu ‘wind’, vínde ‘throw’, vítje ‘monkey
type’, vūvū ‘hummingbird’, avó ‘grandparent’, and aviš ‘airplane’. As mentioned in the discussion of f, there does not appear to be a good exact minimal pair between v and f. However, there are some relevant pairs including vulá ‘rain’ (in a secret language) vs. fulá ‘spray’, which is a minimal pair, but not an ideal one due to the fact that vulá is not a word in the regular language, and there are also the near minimal pairs háfu ‘half’ vs. avó ‘grandparent’ and fitja ‘overgrown’ vs. vīje ‘monkey type. There are similar problems for v and w. However, one does find the near minimal pairs vodú ‘snake type’ vs. wōdu ‘proverb’ and avó ‘grandparent’ vs. awoo ‘old’. Finally, a near minimal pair between v and z is vētu ‘wind’ vs. zūtu ‘close’. Overall, the phonemic status of v seems clear, and the lack of minimal pairs is presumably attributable to accidental gaps arising from the general infrequency of v in the first place.

The phoneme s

The Saramaccan phoneme s has comparable realization to English s and no known significant distributional restrictions. Examples of words containing s are: Saamáka ‘Saramaccan’, sē ‘shame’, básu ‘bottom’, and bósi ‘kiss’. Some minimal pairs and near minimal pairs for s with similar consonants include: basiá ‘undercaptain’ vs. basiá ‘descend; and sikisi ‘six’ vs. sikifi ‘write’.

Unlike Sranan, but like Ndyuka, Saramaccan does not have an alveopalatal fricative [ʃ] (often written as sj or sy for Sranan) in its phoneme inventory. The inclusion of sj in the Saramaccan phoneme inventory in Bakker, Smith & Veenstra (1995:170) appears to be a mistake, as no other source reports such a phoneme for any variant of the language.
The phoneme \( z \)

The Saramaccan phoneme \( z \) has a comparable realization to English \( z \) and no known significant distributional restrictions. Examples of words containing \( z \) are: \( \text{zé} \) ‘sea’, \( \text{zonká} \) ‘coals’, \( \text{azá} \) ‘frond’, and \( \text{pizú} \) ‘celebration’. Some minimal pairs and near minimal pairs for \( z \) with similar consonants include: \( \text{baziá} \) ‘descend’ vs. \( \text{basiá} \) ‘undercaptain’; and \( \text{zútu} \) vs. \( \text{vētu} \) ‘wind’ (see the discussion on \( v \) for comments regarding the lack of a clear minimal pair between \( z \) and \( v \)).

1.1.2.4. Approximants

The phoneme \( l \)

The Saramaccan phoneme \( l \) has a comparable realization to English \( l \) and no known significant distributional restrictions. There is a relatively small set of words showing an alternation (whose conditioning factors are not known, but are presumably sociolinguistic in nature) where an intervocalic \( l \) may alternate with nothing. Some examples of such words (with variants ordered following which form is given the main entry in Rountree, Asodanoe & Glock (2000)) are: \( \text{baí/balí} \) ‘sweep’, \( \text{baláta/baáta} \) ‘rubber’, and \( \text{hía/híla} \) ‘much’. The presence of these pairs is related to a sound change, with fairly complex conditioning factors (see Smith 1987b:210–224 for relevant discussion), deleting word-medial \( l \)’s (which, in some cases, go back historically to other alveolar consonants like \( d \) or \( r \)). This sound change partly explains, for example, the form of the words \( \text{béi} \) ‘bury’ (from English \textit{bury}, passing through a stage with a form like \( \text{béri} \)) and \( \text{fúu} \) ‘full’ (from English \textit{full}, passing through a stage with a form like \( \text{fůlu} \)). (Earlier forms of each of these words with the intervocalic alveolars are, in fact, documented by Schumann (1778).) Instances of words where \( l \) alternates with nothing intervocally simply represent cases where, for some reason,
the sound change is not consistently applied synchronically (perhaps due to dialect borrowing or influence from other Surinamese creoles which did not undergo the sound change but show otherwise similar forms in some cases).

Examples of words containing $l$ are: $lalá$ ‘grate’, $lība$ ‘month’, $akulí$ ‘Indian’, and $alulú$ ‘rice type’. Some minimal pairs for $l$ with similar consonants include: $ló$ ‘clan’ vs. $jó$ ‘melt’; $láí$ ‘load’ vs. $wáí$ ‘happy’; and $lúsu$ ‘loosen’ vs. $dúsu$ ‘thousand’.

**The phoneme $j$**

The phoneme $j$, a palatal glide, has a realization comparable to English $y$, and no known significant distributional restrictions except for an apparent prohibition on the sequence $ji$, parallel to the prohibition on $wu$ to be discussed below in the section on $w$ and in section 1.4. Comparable to $w$, while $j$ clearly has phonemic status in many words, for example, $jáa$ ‘year’ and $wójo$ ‘eye’, there are some cases where a $j$ is transcribed both here and in other sources on the language but where its phonemic status is somewhat ambiguous due to the fact that the sound could simply represent an automatic transition between two vowels that would otherwise be adjacent. Thus, for example, it does not appear that the word written as $alijá$ ‘animal type’ could contrast with a sequence like $aliá$. Furthermore, there are cases like this where authors explicitly indicate that a transcription either with or without a $j$ is possible. Thus, Smith (2003:100) offers both $teeá$ and $teejá$ as possible transcriptions of ‘star’ (and one finds the former transcription in, for example, Donicie & Voorhoeve (1963) and the latter in Rountree, Asodanoe & Glock (2000)). Similarly Rountree, Asodanoe & Glock (2000) list $fjíáá$ as a variant form of the ideophone $fíáá$ ‘completely gone’. As with similar variation found in the transcription of intervocalic $w$, it is possible that the presence/absence of $j$ in a word like $teejá$/$teeá$ ‘star’ represents dialectal or idiolectal dif-
ferences, but it seems equally possible (and, in our view, more likely) that it simply represents different conventions on the part of various authors for transcribing vowel sequences of the sort where a phonetic j would appear naturally.

It is important to point out that, as will be discussed below in section 1.1.3.3, a factor that makes arriving at a resolution of this issue difficult is that, while we might expect that we could appeal to general principles of syllabification in Saramaccan with the hope that they would, at least in some cases, favor one transcription over another, in fact, the language independently allows for a very wide range of vowel combinations without any requirement that some kind of consonant must intervene between the vowels. Thus, while in another language, one might opt to rule out a transcription like teed for ‘star’ because of general constraints against extra long vowels or long vowel plus short vowel hiatus, words like buúu ‘blood’ or beéi ‘braid’ show that such combinations do not appear to be intrinsically problematic in Saramaccan.

Here, we have attempted to standardize the transcriptions in favor of indicating the presence of a j between the vowels when it is salient phonetically based on impressionistic evidence, though in doing this, we are not making any phonological claims.

Further examples of words containing j in Saramaccan are: jejé ‘shadow’, jekekeke ‘fringe’, agía ‘needle’, and ajó ‘onion’. Some minimal and near minimal pairs for j with similar consonants include: jaakú ‘ant type’ vs. waakú ‘fish type’; jò ‘melt’ vs. lò ‘clan’; and jabí ‘open’ vs. njawí ‘lizard type’. (The lack of a true minimal pair for j vs. nj is at least partially due to the restriction on nj where it is found primarily only in morpheme-initial position.)

Similar to alternations between initial wo and o to be discussed in the section on w below, there are a number of words in Saramaccan that alternate between an initial je and e. Examples of such words include éti/jéti ‘yet’ and jésidé/éside ‘yesterday’ (the order within each pair lists
the form of the main entry for this word in Rountree, Glock & Asodanoe (2000) first). As with
the wo/o alternation, this alternation cannot be considered purely phonological, since there some
words beginning je that do not show variant forms without j, for example jési ‘ears’ and jéi
‘hear’.

Nevertheless, despite such exceptions, the general pattern does appear to be that words be-
ginning with the sequence je can also be realized without the initial j, thus making it possible to
treat this as a kind of phonological “rule” (though one with presently unknown conditioning)—
one that can, in fact, be generalized to initial combinations of glides followed by tense mid vow-
els with a similar articulation. However, it is important to point out that the generalization only
appears to go one way since there are a handful of words beginning with e which are not associ-
ated with variants beginning with je. This class of words, however, is much smaller than a para-
lel class of words beginning with o, but not also associated with variants beginning with wo to be
discussed below. Examples of such words include: édi ‘head’ (variant form of hédi), ékisee
‘sneeze’ (variant form of hékisee) (see the section of h for further discussion of this variation),
and éé/éft ‘if’.

Finally, in the transcription used here, as well as in commonly employed orthographic sys-
tems, j in Saramaccan is used to represent not only a glide but also is part of the digraphs dj, nj,
and tj, as well as the trigraph ndj, each representing palatal consonants of different manners of
articulation. Due the lack of consonant clusters in Saramaccan, of these, only nj, when present
intervocally, presents any possible ambiguities as to whether or not the j represents a glide or
is part of a multigraph representation of a phoneme. Specifically, VnjV sequences can, in prin-
ciple, be analyzed as VjV or VnjV. However, as discussed in the section on the phoneme nj, that
particular sound is quite infrequent intervocally in Saramaccan. Therefore, in orthographies
marking nasalization by means of symbols normally associated nasal consonants, the \( VnjV \) will usually represent \( VjV \).

**The phoneme** \( w (hw) \)

The Saramaccan phoneme \( w \) has a comparable realization to English \( w \) and no known significant distributional restrictions, except that it does not appear to be allowed after nasalized vowels (except in reduplications) and there is an apparent prohibition on the sequence \( wu \), parallel to the prohibition against \( ji \) discussed above and in section 1.1.3.3. Because it is not present after nasalized vowels, it does not participate in the nasal harmony pattern associated with \( j \), discussed in section 1.2.3.

Comparable to what is discussed above with respect to \( j \), while \( w \) has clear phonemic status in many words, for example, \( wéi \) ‘weather’ and \( awaá \) ‘palm type’, there are some cases where it is transcribed but its phonemic status is more ambiguous due to the fact that it could also represent an automatic transition between two vowels that would otherwise be adjacent. This is the case, for example, in words like \( uwi \) ‘leaf’ or \( tuwe \) ‘throw away’, and there does not appear to be any phonemic distinction between say, a sequence like \( uwi \) or a hypothetical sequence like \( uti \) (though one does find comparable sequences transcribed in some sources, for example, in the word \( duidui \) ‘insect type’ in Rountree, Asodanoe & Glock (2000)). And, not surprisingly, the sources are inconsistent in their transcription of such sequences. Rountree, Asodanoe & Glock (2000) give variant forms with and without intervocalic \( w \) for the words \( kúákúa/kúwákúwa \) ‘raw’ and \( sukuáti/sukuwáti \) ‘cocoa’, for example. Similarly, the word \( tuwe \) ‘throw away’, mentioned above, is written here with an intervocalic \( w \), but is found as \( túc \) in other sources (e.g., in Donicie & Voorhoeve (1963)). (See section 1.1.3.3 for further discussion of this word.)
It is possible that the different transcriptional conventions represent dialectal or idiolectal differences, but it seems equally possible (and, in our view, more likely) that it simply represents different conventions on the part of various authors for transcribing vowel sequences where a phonetic \( w \) would appear naturally. Here, we have attempted to standardize the transcriptions in favor of indicating the presence of a \( w \) between the vowels when it is salient phonetically based on impressionistic evidence, though in doing this, we are not making any phonological claims.

The fact that \( w \) does not appear to be allowed after nasalized vowels gives us a potential criterion for treating some possible cases of transcribed intervocalic \( w \) as not present phonemically in some words, for instance, \( tūēti \) ‘twenty’ (written as \( tūwēnti \) in Rountree, Asodanoe, and Glock (2000)). When elicited from one consultant this word showed nasalization as indicated in the transcription which, if an intervocalic glide were present phonemically, would otherwise prove to be an exception to the general pattern where \( w \) is not found after nasalized vowels.

Examples of words containing \( w \) where it is clearly phonemic, in addition to those mentioned above, are \( wāta \) ‘water’, \( wīni \) ‘win’, and \( mawī \) ‘bird type’. Near minimal pairs with \( v \) are \( wōdu \) ‘proverb’ vs. \( vōdū \) ‘snake type’ and \( awōo \) ‘old’ vs. \( avō \) ‘grandparent’ (see the section on \( v \) for discussion on why finding true minimal pairs involving \( v \) is difficult). Minimal pairs with other similar consonants include: \( wākū \) ‘fish type’ vs. \( jākū \) ‘ant type’; and \( wāi \) ‘happy’ vs. \( kpāi/kwāi \) ‘tree type’ vs. \( lāi \) ‘load’ vs. \( hāi \) ‘haul’ (see the section on the voiceless labial-velar phoneme for discussion of the \( kp~kw \) alternation).

There are a handful of words recorded in other sources indicating the possibility of a marginal voiceless labiovelar approximant phoneme \([ʍ]\) in at least some Saramaccan varieties, though we have not found it with consultants who have been specifically questioned regarding this. This sound is written as \( hw \) both here and in other sources. Words where it has been re-
ported as being found include *ahwáma*̃́̃ ‘shoulder’ (which also has a variant form *ahõmãui*) and *hwèno* ‘bird type’ (which also has a variant form *hèno*). No minimal pairs for *hw* and *w* have been found in sources reporting it. However, the element *ahwa* in the word *ahwáma*̃́̃, which does not stand on its own but is partially analyzable by virtue of the fact that *mãui* means ‘arm’, could form a very near minimal pair with *awáa* ‘now’ in a speaker whose variety makes the distinction. It appears to be the case that all words attested with *hw* also have variants not making use of *hw*, though what conditions the variation is not known.

Finally, parallel to the class of words whose which alternate between initial *je* and *e*, discussed in the section on *j* above, there is a large class of words which alternate between initial *wo* and *o* (see also section 17.2 for additional discussion), with some examples being *ómi/wómi* ‘man’ and *wójo/ójo* ‘eye’ (the order within each pair lists the form of the main entry for this word in Rountree, Glock & Asodanoe (2000) first). As with the *je/e* alternation, this alternation cannot be considered purely phonological since there are a few words invariably beginning *wo* that do not have a variant beginning with *o*. One of these is *woóko* ‘work’, and another is *wówa* ‘yawn’ which has a variant form *hóha* but no variant *ówa*. Nevertheless, despite such exceptions, the general pattern does appear to be that words beginning with the sequence *wo* can also be realized without the initial *w*, thus making it possible to treat this as a kind of phonological rule (though one with presently unknown conditioning)—one that can, in fact, be generalized to initial combinations of glides followed by tense mid vowels with a similar articulation. However, it is important to point out that, more robustly than in the case of the *je/e* alternation, the generalization only appears to go one way: words beginning with *wo* have variants without initial *w*, but, at the same time, there are many words beginning invariantly with *o*. Words in this category
that have been checked with consultants include óbiá ‘obeah’, okási ‘opportunity’, olóísi ‘clock’, and opaláni ‘airplane’.

**The phoneme h**

The Saramaccan phoneme h is a voiceless glottal fricative with comparable realization to English h. While h appears before all Saramaccan vowels word-initially, intervocically its distribution is quite restricted. Excluding compounds, based on an examination of Rountree, Asodanoe & Glock (2000), one finds it only preceded by a and o and followed by a, o, ò, and u (i.e., non-front vowels). Furthermore, one does not find h after nasalized vowels of any quality (as is also found with w).

As discussed in the section on w, there is some indication that there may be a marginally phonemic voiceless labiovelar approximant hw in Saramaccan, and all of the words in Rountree, Asodanoe & Glock (2000) indicated as containing hw are also associated with variants where an h replaces hw (perhaps with vocalic changes as well).

Examples of words containing h are: ahala ‘forked stick’, ahó ‘hoe’, híti ‘throw’, húku ‘hook’, hē ‘3SO’, and hūjā ‘fingernail’. Some minimal pairs and near minimal pairs for h with similar consonants are: háti ‘haul’ vs. wái ‘happy’; and hiπi ‘pile’ vs. sīπi ‘ship’.

As with j and w, there is a class of words which alternate with respect to the presence or absence of an initial h (see also section 17.2). Examples include: hákísi/ákísi ‘ask’, hédi/édi ‘head’, and hópo/ópo ‘get up’. (In Rountree, Asodanoe & Glock (2000), the h-initial variants are all treated as the main entries.) Unlike the case of the j/O and w/O alternations, there does not appear to be any specific phonological conditioning to this alternation. While it appears to affect the majority of h-initial words, there are also words which do not permit the alternation, for ex-
ample hāso ‘attractive’ and heépi ‘help’ (which consultants reported as having an alternate form of jeépi instead). Therefore, this alternation appears to be best characterized as purely lexical in nature (though beyond that, it is not known what factors might be responsible for which variant is employed). Finally, as also found with the alternations involving j and w, there are numerous vowel-initial words which never appear with a preceding h (or other consonant). So, while h-initial words often have a vowel-initial variant, the generalization does not go in the other direction.

1.1.3. Vowels

1.1.3.1. Basic vowel qualities

As seen in table 1.2, Saramaccan has a symmetrical seven vowel system with two distinct sets of mid vowels, which we characterize here as an upper-mid and a lower-mid set, though the precise articulatory distinction has not been investigated, and we cannot rule out that it may involve factors other than height, as will be discussed below in the sections on the relevant vowels. This characterization should, therefore, be understood as a descriptive expediency rather than a specific phonetic claim. Only two noteworthy distributional restrictions on the appearance of the vowels have been noted. First, as mentioned above, word-initially, prenasalized stops are never followed by the lower mid vowels e and o, at least for those speakers maintaining a distinction between prenasalized stops and plain nasals word initially. Second, though there are exceptions, there appears to be a general restriction on the appearance of mid vowels of different heights in adjacent syllables. This restriction will be discussed in section 1.2.3.
At least for a native English speaker, the most difficult vowel contrasts to reliably perceive are probably those between the members of the front pair and back pair of mid vowels. This is perhaps because the upper mid vowels are not associated with the diphthongization that characterizes English vowels commonly associated with [e] and [o], but it could also be a consequence of their articulation involving a phonetic distinction that is fundamentally difficult for an English speaker to perceive, along the lines of an ATR feature of the sort associated with West African languages.

The vowel \( i \)

The Saramaccan vowel \( i \) has a realization that can be reasonably characterized as IPA [i]. Some minimal pairs and near minimal pairs for \( i \) with similar vowels include: \( f̪i̪i \) ‘fish’ vs. \( f̪e̪i \) ‘face’ and \( b̪e̪i \) ‘bus’ vs. \( b̪e̪e \) ‘frog type’; \( d̪i̪i \) ‘three’ vs. \( d̪e̪e \) ‘dry’ and \( m̪e̪i \) ‘meter’ vs. \( m̪e̪e \) ‘meddle’; and \( f̪i̪ká \) ‘remain’ vs. \( f̪u̪ká \) ‘distress’ and \( b̪ási \) ‘boss’ vs. \( b̪ásu \) ‘bottom’.

The vowel \( e \)

For our main consultants, the Saramaccan vowel \( e \) would appear to be broadly transcribable as IPA [e], that is, as a higher-mid front vowel. Such a transcription is in agreement with Rou-ntree’s (1972b) transcription of this vowel in a description of an Upper River dialect of the language. (Our consultants, however, speak Lower River dialects.) Voorhoeve’s (1959:438) description of the Lower River dialect transcribed this vowel as [i], suggesting a higher phonetic realization than what is implied by [e], and the vowel chart he gives further implies that \( e \) is not only lower than \( i \) but also further back in articulation than either \( i \) or \( e \). We are not able to verify
the articulation of the vowel as compared to the other front vowels to such a high degree of accuracy.

It is important to point out here that Voorhoeve’s transcription of e as [ɪ] should not be taken to mean that e is treated in Saramaccan grammar as a lax vowel (as might be an English vowel transcribed this way). First, it is not clear that the notions tense and lax are, in fact, relevant to the phonological structure of the Saramaccan vowel system. Furthermore, when phonological descriptions of Saramaccan do adopt the terms tense and lax, e is uniformly treated as a tense, while ε is treated as lax, this convention being adopted presumably under the influence of standard descriptions of the English vowel system. None of this is to say that a distinction between tense and lax vowels—or related concepts like [±ATR]—does not play an important role in the phonological system of Saramaccan. Rather, use of such concepts does not straightforwardly yield a more insightful description of the language’s vowel system than simply specifying two distinct mid vowel heights, except perhaps in understanding the nature of some vowel cooccurrence restrictions to be discussed in section 1.2.3. Precise determination of the role a tense/lax distinction (or something comparable) may have in the language’s sound system will have to await thorough instrumental studies or a more detailed phonological analysis than would be appropriate here. (Smith and Haabo (2004:528) do suggest that the lower mid vowels “would appear to be [-ATR]” while the rest are [+ATR], but it is not clear what their evidence is for this.) For further points on this matter, see the discussion of the vowel ε.

Some minimal pairs and near minimal pairs for e with similar vowels include: bēgi ‘request’ vs. bēgi ‘big’ and bēse ‘frog type’ vs. bēsi ‘bus’; wēti ‘white’ vs. wēti ‘law’ and bē ‘let’ vs. bē ‘red’; and kēsi ‘coffin’ vs. kōsi ‘scold’ and kulē ‘run’ vs. kilō ‘kilogram’. 
The vowel ɛ

The vowel written here as ɛ is broadly transcribable as [ɛ], that is, as a lower mid front vowel. This transcription is found in most sources, including Voorhoeve’s early (1959) work and subsequently. In orthographic systems of Saramaccan, this vowel has been represented as è (or as ē when also marked for high tone) and as ě. As noted above in the discussion of e, Saramaccan does not obviously show a tense/lax distinction in its vowel system and, therefore, at least given the present state of our knowledge of Saramaccan phonetics, we characterize the opposition between ɛ and e in terms of height, as a matter of convenience but not as a specific phonetic claim. Rountree (1972b) suggests that the distinction can instead be understood as involving an opposition between bright and muffled vowels, with i, u, ɛ, and ɔ being bright, while e and o are muffled, giving the transcription [ɛ] for ɛ. (Such classification, incidentally, would appear to run counter to one in which ɛ and ɔ are treated as lax and/or [-ATR] with i, u, e, o as [+ATR].) Based on our own impressions, this description does not seem implausible. However, we cannot verify it since the bright/muffled distinction, at least as understood by Rountree (1972b:fn.2), is expected to correlate articulatorily with a more open/closed pharyngeal cavity, an aspect of phonetic description we have not explored. (Also, it is worth repeating the fact that, as mentioned above, Rountree (1972b) was a description of an upriver dialect, while we worked primarily with downriver speakers, and the vowel systems of the two dialects, while of the same basic structure, may very well involve distinct phonetic realizations.)

Some minimal pairs and near minimal pairs for ɛ with similar vowels include: deɛ ‘dry’ vs. dii ‘three’ and metɛ ‘meddle’ vs. méti ‘meter’; wéti ‘law’ vs. wéti ‘white’ and be ‘red’ vs. bé ‘let’; metɛ ‘meddle’ vs. motɛ ‘motor’ and sé ‘side’ vs. só ‘so’; hengi ‘hang’ vs. hängi ‘hunger’ and fiɛ ‘burn’ vs. fiá ‘argue’.
The vowel \(a\)

Saramaccan \(a\) has a realization that can be reasonably characterized as IPA \([a]\). Some minimal pairs and near minimal pairs for \(a\) with similar vowels include: and \(h\acute{a}ngi\) ‘hunger’ vs. \(h\acute{e}ngi\) ‘hang’ and \(fi\acute{a}\) ‘argue’ vs. \(fi\acute{e}\) ‘burn’; and \(k\acute{a}lu\) ‘corn’ vs. \(k\acute{a}lu\) ‘guilder’ and \(ba\) ‘carry (water)’ vs. \(b\acute{o}\) ‘bow’.

The vowel \(u\)

Saramaccan \(u\) has a realization that can be reasonably characterized as IPA \([u]\), though sometimes at the end of the words it was observed to be perceptually close to \([o]\), at least to the ears of a native English speaker, suggesting a possible lowering rule. Some minimal pairs and near minimal pairs for \(u\) with similar vowels include: \(b\acute{u}nu\) ‘good’ vs. \(b\acute{o}nu\) ‘bone’ and \(m\acute{a}ngu\) ‘thin’ vs. \(m\acute{a}ngu\) ‘mangrove’; \(h\acute{u}ng\acute{o}\) ‘gizzard’ vs. \(h\acute{o}nd\acute{o}\) ‘hundred’ and \(dj\acute{\acute{o}}k\acute{\acute{u}}\) ‘hip’ vs. \(dj\acute{\acute{o}}k\acute{\acute{u}}\) ‘nod in sleep’; and \(f\acute{u}k\acute{a}\) ‘distress’ vs. \(f\acute{i}k\acute{a}\) ‘remain’ and \(b\acute{\acute{a}}su\) ‘bottom’ vs. \(b\acute{\acute{a}}si\) ‘boss’.

The vowel \(o\)

The Saramaccan vowel \(o\) presents comparable descriptive complications to those found for the vowel \(e\). It can be reasonably given a broad transcription of \([o]\). Parallel to his transcription of \(e\) as \([i]\), Voorhoeve (1959:438) transcribes \(o\) as \([u]\), and, comparable to the way his vowel chart implies \(e\) is further back than \(i\) or \(\epsilon\), it implies that \(o\) is further front than \(u\) or \(\varepsilon\). We are not able to verify the articulation of the vowel as compared to the other back vowels to such a high degree of accuracy. Rountree’s (1972b) description of the sound also transcribes it as \([o]\), though, as noted, she was working primarily with upriver speakers. As with the opposition between \(e\) and \(\epsilon\),
there is not a clear indication that a distinction between tense and lax is relevant to understanding
the difference between ő and Ϫ, and we descriptively characterize the distinction as one of height
here, though without intending to make a specific articulatory claim (but, see discussion of ϵ and
ρ on the possibility of a bright/muffled distinction and section 1.2.3 for some evidence of a pos-
sible ATR distinction).

Some minimal pairs and near minimal pairs for ő with similar vowels include: bönu ‘bone’
vs. bűnu ‘good’ and mángo ‘mangrove’ vs. mángu ‘thin’; kóto ‘skirt’ vs. kótɔ ‘cold’ and agó
‘knot’ vs. ahó ‘hoe’; and kósi ‘scold’ vs. kési ‘coffin’ and kiló ‘kilogram’ vs. kulé ‘run’.

The vowel Ϫ

The Saramaccan vowel Ϫ presents comparable descriptive complications to the vowel ϵ. It can be
broadly transcribed as [ɔ], as found in Voorhoeve’s early (1959) work and subsequently. In or-
thographic systems of Saramaccan, this vowel has been represented as ɔ (or as ô when also
marked for high tone) and as ɔ̂. As noted above in the discussion of ϵ, Saramaccan does not ob-
viously show a tense/lax distinction in its vowel system and, therefore, at least given the present
state of our knowledge of Saramaccan phonetics, we describe the opposition between Ϫ and ő in
terms of height without making a specific phonetic claim. As noted in the discussion of ϵ, how-
ever, Rountree (1972b) suggests that the distinction can instead be understood as involving an
opposition between bright and muffled vowels, with Ϫ being bright and ő muffled, and she sug-
gests the transcription [œ] for Ϫ. As with the transcription for [ɛ] for ϵ, based on our own impres-
sions, this description does not seem implausible. However, we cannot verify this for the reasons
discussed in the section on ϵ.
Some minimal pairs and near minimal pairs for \( \ddot{o} \) with similar vowels include: \( h\ddot{\text{o}}n\ddot{d} \) ‘hundred’ vs. \( h\ddot{\text{u}}\ddot{\text{n}}\ddot{\text{g}}\ddot{\text{o}} \) ‘gizzard’ and \( dj\ddot{\text{\ddot{o}}} \) ‘nod’ vs. \( dj\ddot{\text{j}}\ddot{\text{k}}\ddot{u} \) ‘hip’; \( k\ddot{\text{o}}\ddot{\text{t}} \) ‘cold’ vs. \( k\ddot{\text{o}}\ddot{\text{t}}\ddot{\text{o}} \) ‘skirt’; and \( ah\ddot{\text{o}} \) ‘hoe’ vs. \( ag\ddot{\text{o}} \) ‘knot’; and \( k\ddot{\text{\ddot{o}}}\ddot{\text{l}}\ddot{\text{u}} \) ‘guilder’ vs. \( k\ddot{\text{\ddot{a}}}\ddot{\text{l}}\ddot{\text{u}} \) ‘corn’ and \( b\ddot{\text{o}} \) ‘bow’ vs. \( ba \) ‘carry (water)’.

1.1.3.2. Nasal vowels

Saramaccan has distinctive vowel nasalization. All vowel qualities have nasalized variants, with no reduction of the vowel inventory under nasalization (though see section 1.2.3 for brief discussion of a small set of phonological environments where certain nasal vowels have been observed significantly change their articulation). The distinctions among the front and back series of vowels are often more difficult to perceive under nasalization, in particular for each pair of mid vowels. Here, all phonemic nasal vowels are transcribed directly with a tilde. However, as mentioned above, most sources transcribe nasalization by means of silent “coda” nasal consonants (with an \( m \) before labial stops and an \( n \) elsewhere), analogous to the way nasalization is marked in French orthography. Thus, for example, \( t\ddot{o}\ddot{p}i \) ‘stump’ would be rendered as \( t\ddot{o}\ddot{m}pi \), \( l\ddot{\text{o}}\ddot{k}\ddot{\text{\ddot{a}}} \) ‘snore’ would be rendered as \( l\ddot{o}\ddot{k}\ddot{\text{\ddot{a}}}\ddot{\text{\ddot{k}}} \), and \( s\ddot{\text{\ddot{e}}} \) ‘shame’ would be rendered as \( s\ddot{\text{\ddot{e}}} \).

For the most part, this convention works reasonably well since Saramaccan’s fairly simple syllable structure results in apparent coda consonants being unambiguous as markers of vowel nasalization. As noted in the discussion of \( mb \) and \( nj \), however, this convention theoretically results in ambiguities in the case of digraphs whose first character is a nasal. In practice, however, this is not as problematic as it would first appear. On the one hand, the language does not seem to contrast sequences along the lines of \( VNDV \) with \( VDV \)—that is, the distinction between nasalized and non-nasalized vowels is apparently neutralized before prenasalized stops (in a pattern.
extending to nasal consonants more generally—see section 1.2.3). On the other hand, while some cases of a true intervocalic nj have been found (see the discussion of nj), these are quite infrequent and, for the most part, one can assume that an orthographic Vnj sequence represents Vj.

Impressionistically, at least to the ears of a native English speaker, Saramaccan nasalization can be fairly “weak”, especially when word-final. However, this may be due, at least partially, to the fact that vowel quality, in general, remains fairly constant in both nasalized and non-nasalized variants of the vowel. Therefore, they are not major secondary cues for nasalization. The specific perception of weak nasalization word finally may also be due to the frequent presence of a degree of devoicing word-finally in elicitation contexts, which reduces perceptual cues to vowel distinctions more generally. When appearing word-medially, nasalized vowels (again, to the ear of a native English speaker) are somewhat easier to perceive since they typically sound like NC sequences. In fact, Rountree (1972b:26) even reports that intervocalic orthographic NT sequences (where T is a voiceless consonant) can actually be realized along the lines of [nt], [mp], [ŋk], etc., and we have found this as well, at least to a limited extent, when words are carefully articulated.

Word finally, Rountree (1972b:26) further implies that vowel nasalization V# can alternate with Vŋ#. While we have not examined this phenomenon extensively, we did encounter this as a possibility for a word Rountree cites, sē ‘shame’, for example, as well as with the word agbā ‘pot type’, when informally examined with one consultant. Thus, a velar coda nasal appears to be a possible allophonic variant of vowel nasalization, at least word-finally in careful speech.

Examples of words containing each of the seven vowel qualities nasalized are given in table 1.3. Where found, minimal or near minimal pairs across the different vowels are given across the word sets, especially for vowels with comparable articulation. It is generally harder to find true
minimal pairs among the nasal vowels than the oral vowels, largely because nasal vowels are overall less frequent than oral vowels.

<table>
<thead>
<tr>
<th>VOWELS</th>
<th>EXAMPLES</th>
</tr>
</thead>
</table>

Table 1.3: Examples of nasal vowels in Saramaccan

Minimal and near minimal pairs for nasal vowels with their oral counterparts include those given in table 1.4. (As above, a relative infrequency of nasalized vowels makes finding true minimal pairs in some cases difficult.)
### Table 1.4: Minimal pairs for vowel nasalization

<table>
<thead>
<tr>
<th>VOWELS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ĭ/ĩ</td>
<td>sí ‘see’ vs. așĩ ‘vinegar’; sîkĩ ‘sick’ vs. sîkũ ‘body’</td>
</tr>
<tr>
<td>e/ē</td>
<td>bé ‘let’ vs. bē ‘beam’; pēti ‘puddle’ vs. pēti ‘comb’</td>
</tr>
<tr>
<td>ε/ē</td>
<td>dé ‘there’ vs. dē ‘rooster’s comb’; pēpe ‘pepper’ vs. hēpi ‘shirt’</td>
</tr>
<tr>
<td>a/ā</td>
<td>dā ‘give’ vs. dā ‘rapids’; hāsi ‘horse’ vs. hāsi ‘ant’</td>
</tr>
<tr>
<td>u/ũ</td>
<td>háfu ‘half’ vs. ahũ ‘grass’; nūsu ‘nose’ vs. njūsu ‘news’</td>
</tr>
<tr>
<td>o/ō</td>
<td>jajō ‘loose living’, ajō ‘onion’; kōto ‘skirt’ vs. kōtu ‘legend’</td>
</tr>
<tr>
<td>ɔ/ɔ</td>
<td>nāso ‘or’ vs. naso ‘nation’; mōso ‘mix’ vs. mōso ‘never’</td>
</tr>
</tbody>
</table>

#### 1.1.3.3. Long vowels and vowel combinations

All Saramaccan vowels appear in short and long forms, and the language also shows a fairly large range of vowel combinations. Both long vowels and vowel combinations are transcribed here simply by means of two adjacent vowels, with both vowels being the same in the case of a long vowel. Just like short vowels, long vowels and vowel combinations have nasalized variants. In some cases, the nasalized variants may only be poorly attested, or not at all, but due to the general prevalence of nasalized long vowels and vowel combinations, there is no reason to believe that such gaps are not simply accidental.

Examples of long vowels for each of the vowel qualities are given in table 1.5.
Table 1.5: Examples of long vowels in Saramaccan

<table>
<thead>
<tr>
<th>VOWELS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ee</td>
<td>běěki ‘tin can’, djeési ‘imitate’, fééda ‘Friday’, kúndjée ‘wood type’, peetá ‘crowd’</td>
</tr>
<tr>
<td>ee</td>
<td>bée ‘belly’, beé ‘very red’, féé ‘for.3s’, feebé ‘boil’, péé ‘play’</td>
</tr>
<tr>
<td>oo</td>
<td>boóko ‘break’, boongó ‘alligator type’, gòò ‘ground’, kókó ‘shell’, kóóko ‘yellow’</td>
</tr>
</tbody>
</table>

Examples of minimal pairs or near minimal pairs across short and long vowels for each of the vowel qualities are given in table 1.6.

Table 1.6: Minimal pairs for vowel length

<table>
<thead>
<tr>
<th>VOWELS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>i/ii</td>
<td>kíki ‘move’ vs. kiíki ‘creek’; nínga ‘suppose mistakenly’ vs. niíngá ‘refuse’</td>
</tr>
<tr>
<td>e/ee</td>
<td>hébi ‘heavy’ vs. heépi ‘help’; péni ‘enclosure’ vs. peéni ‘plane (wood)’</td>
</tr>
<tr>
<td>e/ee</td>
<td>be ‘red’ vs. beé ‘very red’; ké ‘want’ vs. keé ‘cry’</td>
</tr>
<tr>
<td>a/aa</td>
<td>paká ‘pay’ vs. pakáá ‘dowry’ vs. paaká ‘bird type’</td>
</tr>
<tr>
<td>u/uu</td>
<td>búku ‘book’ vs. buíku ‘pants’; pú ‘pool’ vs. púu ‘yield’</td>
</tr>
<tr>
<td>o/oo</td>
<td>kókó ‘shell’ vs. kóóko ‘yellow’; sópu ‘soap’ vs. soópu ‘swell’</td>
</tr>
<tr>
<td>o/oo</td>
<td>hóni ‘bee’ vs. hóni ‘bird type’; tóó ‘push’ vs. tóó ‘crooked’</td>
</tr>
</tbody>
</table>
At least on a surface level, in addition to regular long vowels, one also finds extra long vowels in words like: ḣií ‘stingy’, bëë ‘bread’, baáa ‘brother’, and buúu ‘blood’. (Such long vowel sequences like these are also found in ideophones—see 1.2.4. However, this is less striking since ideophones possess a number of distinct phonological properties.) Generally (and perhaps exclusively), these extra long sequences are the result of a relatively recent sound change wherein intervocalic alveolars were deleted (see the section on I for further discussion). Thus, for example, a word like baáa ‘brother’, derived from the English word with the same meaning, is given as brára in Schumann’s word list, with the present Saramaccan form resulting from deletion of the intervocalic liquids in a form along the lines of barára (with initial epenthesis between the b and r of the etymological br sequence).

A general analytical issue involving long vowels in Saramaccan is whether they should be treated phonologically as adjacent single vowels which happen to be of the same quality, or as two distinct vowels. As was first pointed out by Voorhoeve (1959:437), each half of a long vowel is a separate tone bearing unit, and historically, it is clearly the case that many long vowels—not just extra long vowels—are the result of the recent sound change deleting intervocalic liquids just discussed. Voorhoeve (1959:437), in fact, seems to favor an analysis of long vowels as simple concatenations of two short vowels, and Rountree (1972b:25) reports that in words with extra long vowels speakers themselves treat each transcribed vowel as a separate syllable. We are not aware of unambiguous evidence that would resolve this issue generally, and it does not even seem to be possible to exclude—at least without delving into analysis going well beyond traditional description—the idea that some “long” vowels may be true long vowels, while other “long” vowels may be the surface manifestation of two adjacent short vowels. However, as will be discussed in chapter 2, there is evidence for metrical structure in at least the majority of
Saramaccan words, and it may be the case that sophisticated phonological analysis may be able to draw on generalizations involving metrical structure in order to resolve the issue, at least partially. Below in this section, the possibility that patterns of vowel nasalization may also be relevant in this regard will also be briefly discussed.

In addition to long vowels, Saramaccan allows for a fairly extensive set of vowel combinations as well. At least some of these vowel combinations are frequent enough that it would be reasonable to refer to them as diphthongs, though we refrain from applying that label generally here since, as with the complications of the long vowels just discussed above, we are unaware of unambiguous evidence that would suggest these vowel sequences are treated as a single phonological unit in a way that is analogous to, for example, English diphthongs. As with long vowels, each transcribed vowel in a vowel combination can serve as a separate tone bearing unit, suggesting that they exhibit at least some phonological independence from each other.

Table 1.7 summarizes the possibility/impossibility of the various logically possible vowel combinations (ignoring long vowels) in Saramaccan. A “✓” indicates that a given vowel combination is well attested, a “—” that it does not appear to be at all attested, and a “*” that it is attested, but only infrequently. The distinction between “well attested” and “infrequent”, however, is largely impressionistic and should not be taken to be a tested statistical generalization. There is much variation in the attestation of even the combinations classified as well attested here, and at least a few of the vowel combinations (especially, ea, ie, io, oa, and ai) are borderline cases.
As can be seen in table 1.7, vowel combinations are more common when involving the high vowels \( i \) and \( u \), though the third apex vowel \( a \), is also found fairly often in them. Furthermore, vowel combinations are more common the greater the difference in height between the vowels, with no possible combinations among the mid vowels. Perhaps the most surprising feature of the vowel combinations is the contrast (exemplified below) between \( ei \) and \( ei \) sequences and \( ou \) and \( ou \) sequences.

Examples of the well-attested vowel combinations (i.e., the ones indicated with a “✓” in table 1.7) are given below in table 1.8 (if an instance of the combination in nasalized form is not given, it is because no clear example could be found). All of the examples of the sequence \( oa \) are given as \( owa \) in Rountree, Asodanoe & Glock (2000). Three of those words are also found in de Groot (1977), and two, \( mboa \) and \( sóa \) are written without \( w \), while the third \( koóa \) is written with an \( owa \) sequence. See the section on \( w \) for further discussion. The forms for the sequence \( ue \) are written as \( uwe \) in both Rountree, Asodanoe & Glock (2000) and de Groot (1977) (when
found in the latter). Many of the forms for the sequence *ua* are written as *uwa* in Rountree, Asodanoe & Glock (2000) but are found as *ua* elsewhere (for example in de Groot (1977)). Some of the words with the *ui* sequence are written with an intervening *w* in Rountree, Asodanoe & Glock (2000) while others are not. One, *uí* is written with a *uwi* sequence in both Rountree, Asodanoe & Glock (2000) and de Groot (1977). See the section on *w* as to why it may be reasonable to treat the *w* as non-phonemic in these sequences. (See also related discussion in the section on *j*, though none of the examples given here which might contain a phonetic intervocalic *j* were transcribed as such in Rountree, Asodanoe & Glock (2000).) As discussed above, here, we have attempted to standardize the transcriptions in favor of indicating the presence of a glide between the vowels when it is salient phonetically based on impressionistic evidence, though in doing this, we are not making any phonological claims. However, for the purposes of describing the possible vowel combinations in this section, we have assumed that glides that can be reasonably analyzed as being the automatic result of a transition between two vowels are not phonologically present and do not transcribe them, in contrast to our more general practice. Obviously, the precise analysis one adopts for these glides could have significant consequences for the catalog of attested vowel combinations for Saramaccan, and the assumptions made here result in a description that gives the largest reasonable inventory.
<table>
<thead>
<tr>
<th>VOWELS</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ia</td>
<td>aviaté ‘pilot’, bía ‘beard’, biá ‘turn’, ganĩá ‘chicken’</td>
</tr>
<tr>
<td>ie</td>
<td>fié ‘burn’, nĩé ‘strand’, temiemaipa ‘tree type’, piepie pau ‘tree type’</td>
</tr>
<tr>
<td>io</td>
<td>fiófó ‘spirit revenge’, lío ‘river’, milîo ‘million’, tapióka ‘tapioca’</td>
</tr>
<tr>
<td>ei</td>
<td>féfi ‘five’, mbéi ‘make’, léi ‘learn’, seí ‘ant type’, wéi ‘tired’</td>
</tr>
<tr>
<td>ei</td>
<td>élísi ‘ice’, léi ‘drive’, sikéki ‘fright’, wéi ‘dedicate’</td>
</tr>
<tr>
<td>ea</td>
<td>félli ‘animosity’, kandéa ‘resin’, matééa ‘spray’</td>
</tr>
<tr>
<td>ai</td>
<td>agàí ‘fish type’, djakaí ‘monkey type’, maipá ‘tree type’, páíti ‘priest’</td>
</tr>
<tr>
<td>au</td>
<td>laú ‘crazy’, matjáu ‘axe’, máú ‘hand’, sauké ‘fish type’</td>
</tr>
<tr>
<td>oa</td>
<td>mboa ‘plant type’, sóá ‘spoil’, koóá ‘skim’, koóá ‘sawdust’</td>
</tr>
<tr>
<td>oi</td>
<td>asóítábaku ‘tobacco type’, bóí ‘cook’, bóíti ‘except’, hói ‘hold’, olóísi ‘clock’</td>
</tr>
<tr>
<td>ei</td>
<td>kí ‘walk around’, móí ‘soft’, móíti ‘effort’, nóíti ‘never’</td>
</tr>
<tr>
<td>ou</td>
<td>dóú ‘arrive’, fítoó ‘trust’, fóú ‘bird’, góútu ‘gold’</td>
</tr>
<tr>
<td>eu</td>
<td>fóútu ‘mistake’, kóósu ‘socks’, tóú ‘marriage’, wóútu ‘words’</td>
</tr>
<tr>
<td>ue</td>
<td>akúsu ‘rodent type’, duéngi ‘force’, ndjúéndjue ‘lizard type’, tãéti ‘twenty’</td>
</tr>
<tr>
<td>ua</td>
<td>kambalúa ‘reed type’, kúákúa ‘raw’, suálufu ‘matches’, súápu ‘swamp’</td>
</tr>
</tbody>
</table>

Table 1.8: Examples of vowel combinations

Examples of the poorly attested vowel combinations are given in table 1.9. The examples attempt to be exhaustive for monomorphemic words in Rountree, Asodanoe & Glock (2000) (excluding ideophones). At least one of these words, tůwe ‘throw away’ plays an important grammatical role in Saramaccan (see chapter 8), and is, therefore, used quite frequently. The fact that
ue is otherwise unattested suggests that, at least for this word, an analysis of the intervocalic w found in some orthographic representations (including ours) as phonemic might be warranted. (We should also note that the glide transition seems impressionistically more prominent in tñe than in the phonetically similar word tñe ti ‘twenty’, showing an otherwise more common combination, which may provide further evidence for such an analysis.) We were not able to verify all the transcriptions of Rountree, Asodanoe & Glock (2000), and this is noted when the relevant examples are presented.

<table>
<thead>
<tr>
<th>VOWELS</th>
<th>EXAMPLES</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ie</td>
<td>bóbíente ‘fruit type’</td>
<td>bóbíe: when checked with one of our consultants</td>
</tr>
<tr>
<td>ao</td>
<td>kakáo ‘cacao’, laláo ‘whale’</td>
<td>difference between ao and au could not be detected in elicitation</td>
</tr>
<tr>
<td>eu</td>
<td>lêu ‘lion’</td>
<td>variant form of lêu, when checked with one consultant, found lêu</td>
</tr>
<tr>
<td>eue</td>
<td>lêuun ‘lion’</td>
<td>variant form lêu, when checked with one consultant, found lêu</td>
</tr>
<tr>
<td>cae</td>
<td>amnattawe ‘vine type’</td>
<td>when checked with a consultant, the word was not recalled</td>
</tr>
<tr>
<td>uue</td>
<td>tûe ‘throw away’</td>
<td></td>
</tr>
</tbody>
</table>

Table 1.9: Marginal vowel combinations

Across morpheme boundaries there do not appear to be any restrictions on vowel combinations. Thus, reduplicated forms and compounds involving vowel-initial words will sometimes also result in further examples of poorly attested combination or combinations that are otherwise unattested. For example, a further example of the sequence ie is found in edíedí ‘dirt in grain or food’ (which is a formal reduplication of a bound stem—see section 3.1.6). Similarly, one finds
the sequence *i* in a word like *blúdu* ‘tree type’ which is a compound consisting of an apparently bound root *bí* followed by the morpheme *údu* ‘firewood’.

Impressionistically, in elicitation contexts, nasalization is stronger towards the end of long nasalized vowels, at least when not preceded by a nasal consonant (as in a word like *mɔ̃́ɔ̃́* ‘more’—which is a phonologically unusual word as will be discussed in section 1.2.3). This was observed, for example, in the words *gõō* ‘ground’, *pẽējã* ‘fish type’, and *tũěti* ‘twenty’. In work with one consultant, there seemed to be an almost complete lack of nasalization in the first vowel of *fẽāti* ‘animosity’ (and an *n* also appeared to be phonetically present in the recorded tokens after the *a*). This word has a variant form *felāti*, and the pattern of nasalization suggests perhaps the two vowels are not interpreted as being part of the same syllable even when the *l* is not found and indicates more generally that differential patterns of nasalization in long vowels or vowel combinations may be probative in determining the phonological structure of these patterns in some cases. However, while we would not rule out the possible discovery of a few marginal cases suggesting a contrast between *VV* and *ṼV* sequences in Saramaccan, it does not appear to be a significant area of contrast even if, phonetically, nasalization is not necessarily spread out evenly within long vowels.

1.2. Phonotactics

1.2.2. Syllable structure and epenthetic vowels

Contemporary Saramaccan only clearly allows syllables of shapes *V* and *CV* (though earlier varieties may have allowed for a wider range of syllable structures (Aceto 1996)), assuming that sounds like *mb, nd, ndj, ng, kp/kw*, and *gb/gw* are treated as single segments (and, as far as we are aware, there is no reason not to given that, otherwise, there is no evidence for consonant clus-
ters in the language). Rountree (1972b:23) further analyzes the language as showing CVN syllables, as a kind of allophonic variant of vowel nasalization. For example, the word represented here as lāza ‘spear’ is transcribed by her as [lánza]. However, as discussed in section 1.1.3.2, not only is there no evidence for a contrast between V and VN sequences in Saramaccan, it is not clear to us that there is often a true phonetic nasal consonant in words like lāza as opposed to a perceived nasal, though we have occasionally found tokens where nasals in comparable positions seem to be found. However, as also discussed in section 1.1.3.2, in word-final position, Rountree (1972b:26) reports the possibility of a final velar nasal as an allophonic (free) variant of vowel nasalization, which would obviously be less susceptible to being the result of misperception than a word-medial nasal. Therefore, it seems that, on a phonetic level, at least CVŋ# syllables are found. Phonologically, however, since apparent coda nasals, when reported, are almost always allophonically related to vowel nasalization, it would seem more accurate to describe the Saramaccan syllable canon as (C)V with the suprasegmental feature of vowel nasalization sometimes resulting in more complex phonetic realizations.

Beyond the above possible exceptional cases, there are also a handful of words showing apparent coda m. Several examples of these found in Rountree, Asodanoe & Glock (2000) are ideophones: gbalam ‘thunder’, gbemm ‘hit and falling’, kám ‘full’, tjam ‘piercing’, and tóm ‘sitting straight’. (The last of these has a variant from tő.) The remaining examples in that source are: adamkilo ‘measuring worm’, adjámtóo ‘rice type’, and komsáka ‘athlete’s foot’. A presumably recent borrowing (drawn from Glock and Rountree (2003)) showing such a syllable is pomtē ‘potato’ (ultimately from French pomme de terre). Thus, the syllable shape CVm also appears marginally possible in the language. However, we have not checked these words with consultants, and it may be the case that some of these apparent instances of coda m are syllabic, re-
sulting from the loss of a vowel that was earlier present after them (see the discussion on m above). In addition, one ideophone was recorded from a consultant with the form kpáp for the sound of an arrow being let loose, the only instance we are aware of a word with a p coda.

There are numerous vowel-initial words in Saramaccan, especially for the vowel a (see section 3.2.3). Some examples include: agó ‘knot’, éé ‘if’, éísi ‘ice’, íngi ‘Amerindian’, óbia ‘obeah’, ʒfu ‘oven’, and údu ‘firewood’. Such words clearly attest the possibility for syllables of shape V in the language. In addition, as discussed in section 1.3.3.3, it may be possible to analyze some vowel sequences as consisting of separate syllables, in which case a non-initial vowel would also have shape V. Thus, for example, Rountree (1972b:25) states that her consultants syllabified a word like baáa ‘brother’ as ba-á-a. We leave open the question of how best to analyze such sequences phonologically here, but clearly it has consequences regarding the prevalence of syllables of shape V in the language.

Saramaccan’s simple syllable structure has resulted in extensive vowel epenthesis, both to break up consonant clusters and to prevent the appearance of word-final codas in transferred and borrowed words. In the contemporary language, the most frequent epenthetic vowels are the high vowels i and u, though older vocabulary indicates that an earlier stage of the language other strategies may have been employed. Whether i or u is chosen is dependent on the adjacent consonants as well as on nearby vowels. No general study of loanword adaptation has been done, however, making it difficult to reliably devise general rules regarding such vowel epenthesis. A particular problem is that Sranan shows comparable vowel epenthesis (though not completely the same since it allows consonant clusters unattested in Saramaccan), and many relatively recent loanwords of clear Dutch provenance would have entered Saramaccan via Sranan. Thus, it is not possible to determine general loanword adaptations simply via comparison of a Saramaccan form.
to its Dutch source since the Saramaccan form may, in fact, be an adaptation of an already adapted Sranan form.

Nevertheless, it seems possible to make some tentative generalizations. Round vowels in a borrowed word are often associated with the appearance of an epenthetic \( u \) and other vowels an \( i \). Thus, for example, on the one hand, one finds an epenthetic \( u \) in words like \( \text{suwálu}_1^u \) ‘matches’ adapted from Sranan \( \text{swaru}_1 \) ‘match’, \( \text{sukú}_1^u \) ‘screw’ adapted from Sranan \( \text{skru}_1^u \) ‘screw’, and \( \text{fóló}_1^u \) ‘fork’ from Sranan \( \text{forku} \) ‘fork’. On the other hand, one finds an epenthetic \( i \) in words like \( \text{póbi}_1^i \) ‘doll’ from Sranan \( \text{popki} \) ‘doll’, \( \text{báiki} \) ‘beam’ from Sranan \( \text{barki} \) ‘beam’, and \( \text{félfi} \) ‘paint’ from Sranan \( \text{ferfi} \) ‘paint’—in the case of the last two words the vowels no longer appear as epenthetic because of the loss of intervocalic \( l \) (see section 1.3.3.3), either because of a historical sound change effecting these words directly or as the result of an established Sranan transfer rule. In addition to the quality of adjacent vowels, the quality of the consonants being broken up by the epenthetic vowel can also be relevant. For example, the epenthetic vowel in \( Cw \) clusters is generally \( u \) as in \( \text{suwáki} \) ‘sick’ from Sranan \( \text{swaki} \) ‘weak’ and \( \text{tuwálu}_1^u \) ‘twelve’ from Sranan \( \text{twarfu} \) ‘twelve’, while the epenthetic vowel in \( sk \) clusters is generally \( i \), as in \( \text{sikó}_1^i \) ‘school’ from Sranan \( \text{skoro} \) ‘school’, and \( \text{sikópu} \) ‘kick’ from Sranan \( \text{skopu} \) ‘kick’, except when the following vowel is \( u \) as in \( \text{sukú}_1^u \) just given above. (The relevant epenthetic vowels in the above examples are all bolded. It is possible that some of the borrowings may have been directly from Dutch rather than through a Sranan intermediary.) However, exceptions to these patterns are not hard to find, and no study has been done attempting to clearly delineate synchronic transfer rules from historical patterns of vowel epenthesis. Therefore, whether or not any of these epenthesis strategies are synchronically real in some sense is an open question.
1.2.3. Co-occurrence restrictions

Various co-occurrence restrictions among segments have been detected in Saramaccan roots. Due to the lack of morphology in the language, none of these restrictions result in allomorphy, and they, therefore, only take the form of morpheme structure constraints. Undoubtedly, some such constraints have yet to be detected, though we discuss those that we are aware of here. Again, due to the lack of morphology in the language, it is not possible for us to be sure of the extent to which these constraints are part of the synchronic grammar as opposed to being a by-product of various processes of historical change.

Prenasalized stops and mid vowels: As mentioned in the discussion of mb and nd above, there is a restriction on word-initial nasal-vowel sequences in which, for those speakers distinguishing between prenasalized stops and plain nasals word-initially, before the high-mid vowels e and o one finds only prenasalized stops, while before the low-mid vowels ɛ and ɔ one finds only plain nasals. Thus, for example, for at least some speakers/dialects, one finds word pairs like mbéti ‘animal’ vs. méti ‘meter’, but no forms like *měti or *mbéti. (Recall, however, that for our main consultant, word-initially, a word like mbéti was, in fact, rendered as méti.) Other examples of words illustrating this restriction are ndéti ‘night’ vs. néti ‘fishing net’, mboko ‘fish type’ vs. mọtjó ‘prostitute’, and ndófu ‘a lot’ vs. nọbu ‘identifier’, though it should be said for some of these combinations there are not many words containing them to start with. This restriction on prenasalized stops before lower-mid vowels does not hold word-internally as seen in words like, mémbe ‘remember’, pendé ‘spotted’, and hóndɔ ‘hundred’. However, examples of plain nasals before upper-mid vowels word-internally appear to be close to non-existent, with no clear examples found in Rountree, Asodanoe & Glock (2000). With respect to ng, the one prenasalized stop
not paired with a plain nasal, there is no apparent restriction on what vowels it can precede. While very few words begin with \(ng\) in Saramaccan, the only one whose first vowel is mid in Rountree, Asodanoe & Glock (2000), \(ng̃d̃\) ‘ditch’, contains a low mid vowel, contrary to the pattern found for the other prenasalized stops. Furthermore, word-externally, one finds examples of \(ng\) followed by both upper mid and lower mid vowels, for example, in \(gengé\) ‘bell’, \(malène\) ‘lazy’, \(pingó\) ‘pig type’, and \(dʒōngō\) ‘drunk’.

Before non-mid vowels, \(mb\) and \(nd\) can clearly contrast with \(m\) and \(n\), respectively, as seen in minimal pairs and near minimal pairs like: \(mbů\) ‘mill’ vs. \(mů\) ‘child’, \(mbata\) ‘deer type’ vs. \(máta\) ‘mortar’, \(mbulu\) ‘receding hairline’ vs. \(múlu\) ‘uterus’, and \(namá\) ‘touch’ vs. \(nambá\) ‘strap’; and \(hǒnd̃\) ‘hunt’ vs. \(hɔ̃ni\) ‘bee’, \(pína\) ‘pin’ vs. \(pindá\) ‘peanut’, and \(kándúu\) ‘amulet type’ vs. \(kaánu\) ‘tree type’. However, there are still some potentially noteworthy gaps in attested contrasts—for example, the lack of an \(n/nd\) distinction before a word initially given that there are many words beginning with \(na\) in the language (contrasting with \(nu\), for example, which is much less common to begin with, rendering the lack of \(n/nd\) distinction word-initially before \(u\) less striking).

**Nasal consonants and nasalized vowels**: The cooccurrence of plain nasal consonants and prenasalized stops immediately before or after nasalized vowels, is relatively uncommon, though some exceptions have been noted including a variant form of an ideophone \(gíngú/gíng̃\) ‘stuck fast’ found in Rountree, Asodanoe & Glock (2000), the word \(mʊñj̃a\) ‘wet’ (also unusual for allowing a word-medial palatal nasal), and several words containing long vowels, such as \(m5ɔ\) ‘more’, \(mâu\) ‘hand’, and \(ganîa\) ‘chicken’.
**Prenasalized stops in a single morpheme:** Multiple prenasalized stops in direct succession in a single morpheme are quite rare, with the only clear case we are aware of being *bingúngu* ‘stink bug’. The occurrence of multiple prenasalized stops even anywhere within a single morpheme is rare, in fact, and we are aware of only one further case *mbáfumbá* ‘animal type’. Otherwise, excepting compounds, multiple prenasalized stops in a single word are generally only found in words containing reduplicated elements, some of which, like *malembélémbé* ‘medicinal plants’ and *jengéjenge* ‘rice type’, contain instances of reduplicated stems not found in isolation.

**Upper mid and lower mid vowels:** Generally, upper mid and lower mid vowels do not appear together within a single morpheme (see also Smith 1975). Thus, one readily finds forms like *kóto* ‘skirt’, *kóto* ‘cold’, *bése* ‘frog type’, *bété* ‘better’, *kónde* ‘village’, and *éndolé* ‘stork type’ containing multiple mid vowels of the same height, while forms like *kɔ̀déi* ‘rope type’, *pikoléti* ‘bird type’, and *tōdʒɔ* ‘spirit type’, are much less frequent, with around ten or so cases found in Rountree, Asodanoe & Glock (2000). This co-occurrence restriction is reminiscent of what is found in West African languages exhibiting ATR harmony (see Casali 2008), suggesting a possible basis for analyzing the mid vowels in Saramaccan as contrasting across ATR rather than height.

**Contextualized nasalized vowel allophony:** While detailed phonetic study will no doubt reveal a range of significant phonetic differences between plain vowels and nasalized counterparts, as noted by Rountree (1972b:24–25), at least in environments involving nasalized vowels and following voiceless stops, these distinctions can be quite salient.
For instance, in a word like *lōtu* ‘go around’, the first vowel sounds like something in between [ɔ] and [ɔ], and in a word like *vētu* ‘wind’ the first vowel sounds perceptually closer to English [ɪ] than the expected vowel [e]. By contrast, the first vowel in a word like *pēējā* ‘fish type’ appears to match [e] fairly well (and certainly much more so than in *vētu*), clearly indicating this effect is not merely connected to vowel nasalization but, rather, involves nasalization in specific contexts.

This phenomenon has not been examined in depth by us or in previous work on the language. Thus, we only remark on it briefly here.

**Nasal harmony**: As first pointed out by Rountree (1972b:26), there is a minor nasal harmony pattern in Saramaccan wherein vowels on either side of a *j* or a *nj* within a morpheme must both be either nasalized or non-nasalized. Thus, one finds numerous instances of words containing sequences like *VjV*, such as, *fája* ‘fire’, *wójo* ‘eye’, *adója* ‘plant type’, and *mujēe* ‘woman’, and words containing sequences like *VjṼ*, such as *hɔ̃jɔ̃hɔ̃* ‘insect type’, *hûjã* ‘fingernail’, *kûjã* ‘bird type’, *pēējã* ‘fish type’, *pâjã* ‘hold’, but words containing *VjV* or *VjṼ* are quite uncommon. The only two clear cases of the first pattern we have found within a morpheme are *ajô* ‘onion’ and *mapijô* ‘louse type’, as reported Rountree, Asodanoe & Glock (2000). An additional word showing this pattern, *kɛîjɔ* ‘pencil’, is associated with a variant *kêjɔ* that does show nasalization harmony. This disharmonic pattern is also reported in *azɔkîjîjê* ‘firefly’ whose form, from the perspective of both tone and vowel cooccurrences, suggests that it is etymologically complex (though it does not appear to be analyzable synchronically). This word is disharmonic in both directions exhibiting *VjV* or *VjṼ* patterns. The pattern *VjṼ* appears to be more marginal, with the clearest possible in Rountree, Asodanoe & Glock (2000) being *sââjâ* ‘give away’, which is also
associated with a harmonic variant form saajá (and which is the form produced when checked with a consultant).

Due to the fact that intervocalic nj is relatively uncommon in Saramaccan (see the discussion in the section on that phoneme) words exemplifying nasal harmony involving this consonant are also relatively uncommon but the pattern can be seen, for example, in njānjū ‘new’, njānjā ‘food’, and sipanjšənu ‘Spanish’.

**Homorganic glide-vowel sequences:** As discussed above in the sections on j and w, there appears to be a ban on the sequences ji and wu in the language, which are unattested in Rountree, Asodanoe & Glock (2000). This can be understood as a general ban on a glide followed by a vowel with the same place of articulation.

### 1.2.4. Ideophones

Saramaccan has an extensive array of ideophones with distinct phonological characteristics from the rest of the vocabulary. Section 2.2.3.4 discusses their tonal features and section 14.7 discusses their syntax. Here, we touch briefly upon their segmental features.

Perhaps the most striking segmental feature of ideophones is that a handful of them allow a nasal coda of form m—otherwise the language only very rarely allows coda consonants. As mentioned above in section 1.2.1, four ideophones with this property are given in Rountree, Asodanoe & Glock (2000) (some of which are associated with variants without nasal codas): gbalam ‘thunder’, gbemm ‘hit and falling’, kám ‘full’, tjam ‘piercing’, and tóm ‘sitting straight’.

Another noteworthy feature of ideophones, not surprising given their sound symbolic status, is that transcribed long vowels in ideophones are often extra long—of roughly comparable length
to sequences of three or more transcribed vowels. Thus, “long” vowel transcriptions of ideophones are typically used to indicate a stylistically lengthened vowel rather than a true long vowels. For example, the ideophone transcribed as ēmē ‘very white’ in Rountree, Asodanoe & Glock (2000), would appear, in some instances at least, to be uttered closer to IPA [ēːː] (if not longer) than [ēː]. Similarly, transcriptions containing sequences of three or four vowels in an ideophone should also be taken as indications of stylistic lengthening rather than, say, an analysis of those sequences as consisting of three or four moras.

With respect to consonant distribution, although ideophones draw on the same segmental inventory as non-ideophones, certain sounds are much more common in ideophones than in the rest of the vocabulary. For example, gb (but not kp) is quite characteristic of ideophones but otherwise not especially common. Though the distribution is less skewed, the same can be said for f and v, as well.

Finally, the overall patterning of segments in ideophones for those of more than one syllable can be described as generally “repetitive” both because they often contain apparent cases of full or partial reduplication and also often show total vowel harmony. Examples of apparent full reduplication in ideophones include bugubugu ‘shaking out’, fiafia ‘energetically’, and gbēgbē ‘iron hitting iron’. Examples of apparent partial reduplication ideophones include: dalala ‘straight’, dīlīlī ‘unwrinkled’, and tjūlūlū ‘without a thing’. Additional examples of ideophones wherein there is full vowel harmony include: fājā ‘messy’, fēlele ‘shallow’, and gbōlō ‘lukewarm’. However, these patterns are only tendencies, and there are many ideophones not adhering to them, for example, dimbaa ‘heavy object on water’, fskī ‘pale’, and kpatii ‘many’.

See section 1.4 for discussion of sporadic phonological alternations, in which some ideophones participate.
1.3. Lexical strata

A noteworthy feature of the Saramaccan lexicon which we will not explore in detail here, but which is worth pointing out at least briefly is the apparent “layering” of different strata of vocabulary. Historically speaking, some of these strata are no doubt the result of Saramaccan’s origins as a contact language and its acquisition of vocabulary from a range of source languages: English, Portuguese, Gbe languages, western Bantu languages, Dutch, Sranan, Amerindian languages, etc. (see Good (2011) for a discussion of “loanwords” in Saramaccan where the sources of the Saramaccan lexicon are discussed in more detail).

The most prominent synchronic aspects of the stratification of the Saramaccan lexicon are prosodic in nature and will be discussed in more detail in section 2.2. However, there are segmental features that appear to define different layers of vocabulary as well. For example, there is an unexpectedly large set of nouns origin beginning with an a that is reminiscent of a Niger-Congo noun class prefix (and in some cases, at least, presumably a transfer of such a prefix) (see section 3.2.3). While normally one would not necessarily view a category of words defined by their initial segment as a “stratum”, in the Saramaccan case, there is a noted imbalance holding among words beginning with vowels where, overall, they are not particularly common when one excludes those beginning with a. For example, in Rountree, Asodanoe & Glock (2000), there are nearly 300 a-initial words against less than 100 for all other vowels combined. Furthermore, there are a number of words which alternate between a-initial and a-less variants, for example (a)kulí ‘Hindustani’ (where the a-initial variant is clearly a Saramaccan innovation with the word ultimately deriving from the same form as English coolie), (a)tengítengú ‘limping’, and (a)dikpókpo ‘mushroom’, suggesting there is more to the presence of a- than mere accident.
Perhaps, the α- can be interpreted as a prefix, but, if so, it would seem impossible to devise any conditioning environment for its presence since the class of words showing α- is not obviously semantically coherent.

Another apparent stratum was discussed in the section on h (see also the sections on j and w). As mentioned, there is a class of words characterized by showing alternation between beginning with h or simply a vowel. Membership in this class is not directly predictable from a word’s form since some h-initial words are not associated with a vowel-initial variant and there are a vast number of vowel-initial words not associated with an h-initial variant. It, therefore, seems reasonable to consider this class of words to be a special lexical stratum.

Synchronically, the status of other, apparent strata is unclear for the same reason that the status of many possible morphophonological patterns (see section 1.2.3) is unclear: namely, without extensive morphology, evidence for the strata primarily takes the shape of static word forms rather than productive alternations.

1.4. Sporadic alternations

There are a handful of classes sporadic alternations not discussed above found in the Saramaccan lexicon which seem worthy of mention but which are not systematic enough for one to arrive at a general characterization of their conditioning factors, though they may be dialectal in nature in some cases. The alternations described here are purely lexical—see chapter 3 for discussion of irregular morphophonemic alternations and see chapter 16 for further discussion of lexical variation. This discussion is not exhaustive, and other sporadic alternations can be found by an examination of variant forms in Rountree, Asodanoe & Glock (2000).
Vowel shortening: A few words show alternations between long and short vowels including, *heelú/helú* ‘curse’; *kúúkútu/kúkútu* ‘insect type’, and *hékísee/hékíse* ‘sneeze’.

Long vowels and diphthongs: A few of words show variant forms with a simplification of $Vi$ diphthongs to $VV$ including, *adjáinsi/adjáansi* ‘spider’, *beipé/beepé* ‘graveyard’, and *péíkáa/péékáa* ‘horsepower’.

**wi~u:** At least two words show variant forms where the sequence *wi* alternates with *u*. These words are *wiwíi/uwíi* ‘leaf’ and *kwíndji/kúndji* ‘squeeze’. While an alternation involving just two words might not seem obviously noteworthy, it bears mentioning here because it follows the pattern mentioned in the section on *w* and in section 1.2.3 wherein the sequence *wu* is unattested in Saramaccan, which presumably partly explains why the alternation is between *wi* and *u* instead of the perhaps more expected *wi* and *wu*. This alternation is, thus, additional evidence for this cooccurrence restriction.

**Palatalization of k:** A few words show an alternation involving palatalization of a velar before $l$. Examples include, *kína/tjína* ‘taboo’, *lémíki/lémítji* ‘lime tree’. However, there is no indication that this is the result of a productive phonological process in the language and, as discussed in the section on *k*, these pairs may be the result of borrowing variant Sranan forms, where allophonic palatalization of velars before front vowels is found.
Prosodic phonology

2.1. Introduction

A particularly striking feature of Saramaccan prosodic phonology is the apparent maintenance of two distinct word-level prosodic systems, one accentual and the other tonal. The phrasal phonology is most saliently characterized by a process of tonal plateauning as well as a number intonational sentence-level processes and has already been relatively well-described in the literature, making Saramaccan one of the best studied creole languages in terms of its suprasegmental phonology. (This chapter focuses only on tonal and accentual aspects of phonology in Saramaccan. Other suprasegmental aspects of the language’s phonology, e.g., syllable structure, are discussed in section 1.2.) The discussion of word-level prosody here will, in some ways, deviate from traditional description insofar as it will include not only illustrative examples of phenomena but also significant analytical argumentation. This is necessary to establish the existence of an apparent accentual/tonal split in the Saramaccan lexicon. Furthermore, since such a pattern is typologically unusual it requires a greater level of detail in its description than a typologically “normal” system would.

It should be noted that tonal patterns in Saramaccan are often not transcribed at all in other sources on the language and, even when they are, one not infrequently finds inconsistent transcriptions. While some of this is likely to due to genuine dialectal or idiolectal variation, more than in other features of the language’s grammar, a good deal of this variation is probably due to inconsistencies or misapprehensions on the part by the analyst—no doubt some of which will be found in this chapter as well, though hopefully to a much less significant degree than found elsewhere. Section 2.5 discusses some analytical problems associated with tonal transcription in
Saramaccan relating to its split prosody and should be examined by any reader interested in making use of the data here to advance specific claims regarding Saramaccan’s prosody.

Tonal transcription (for examples not given a source in the literature) are based on impressionistic evidence, often augmented with instrumental data. Most of the phrasal data in this chapter, when drawn from other sources, has been double-checked with our consultants, though this has not always been possible, and a significant number of the word’s cited as exemplifying specific prosodic patterns have not been double-checked, primarily in cases where they merely offer further examples of patterns already determined to be fairly robust.

2.2. Word-level prosody

2.2.1. Introduction

As discussed in detail in Good (2004), Saramaccan shows an apparent split wherein the majority of its words are marked for pitch accent but a noteworthy minority are marked for tone. At a very general level, the source of the split seems straightforward: Tonal “African” words and accentual “European” words have both contributed to the Saramaccan lexicon without leveling of the language’s prosodic structure in favor of one type of system over another. In this respect, the Saramaccan split appears to be different in degree, but not in kind, with what is found in languages like English or Japanese where distinct prosodic strata are found associated historically with massive borrowing of Latinate and Sinitic vocabulary respectively.

Obviously, the presence of such a split complicates the description of the language’s prosodic system considerably, especially given that a high pitch—apparently phonetically indistinguishable from a lexical high tone (see Good (2006))—is part of the surface manifestation of accent in the language. As a descriptive preliminary, we define our senses of the terms accent, pitch ac-
cent, stress, and tone in (2.1). While the particular wording of the definitions is our own, it is our impression that the way we use these terms is as close to “standard” as possible given the extensive variation found in their use in the literature.

(2.1)

a. **Accent**: An abstract indication of linguistic prominence distinguishing one syllable from the other syllables within a word—hence, a marking of syntagmatic contrast within the word.

b. **Pitch accent**: The realization of accent as a specific tone (or tone contour) which is placed with reference to an accented unit.

c. **Stress**: The realization of accent by making primary use of acoustic parameters other than pitch—typically amplitude, duration, and segment quality.

d. **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.

The importance of surface pitch fluctuations to Saramaccan grammar has been well-recognized as least as far back as Voorhoeve (1961). Until recently, these pitch fluctuations have generally been considered to be manifestations of “tone”—though, of course not all authors may have necessarily meant the same thing by this term. However, the nature of Saramaccan surface tonal patterns, in fact, suggests that, while one can characterize Saramaccan surface phonology in terms of high and low “tonal” targets (as can also be done for the intonational systems of uncontroversially non-tonal languages like English), it is not quite accurate describe Saramaccan as tonal in the technical sense intended by (2.1d) because, for the majority of the vocabulary, there
is no evidence for a paradigmatic contrast of tonemes in the relevant domain, which is, for Saramaccan the single vowel of a short syllable or either half of a long vowel or diphthong (and, more rarely, m, see the discussion on m in section 1.2.1). Accordingly, we divide the rest of our discussion of Saramaccan word-level prosody into three sections, the first (section 2.2.2) treats those elements of the vocabulary which are most easily interpreted as being marked for accent, the second (section 2.2.3) discusses those elements of the vocabulary which are most easily interpreted as being marked for true tone, and the third (section 2.2.4) discusses some exceptional cases. Compounds and reduplications are not treated in this section but, rather, in section 2.3.1.1.

In the transcription system used here, any orthographic vowel is a tone bearing unit (TBU). Analytically speaking, it may, in fact, make sense to treat the TBU as a single mora, though we will not generally adopt such terminology in the following description, only raising the issue where particularly relevant. As discussed in section 1.1.3.3, the precise status of surface long vowels is not completely clear insofar as we are unaware of clear-cut evidence that crucially bears on whether they should be treated as two long vowels or sequences of two vowels which happen to have the same quality. Resolution of this issue is a prerequisite for making a clear determination regarding whether the TBU is better treated as a vowel or a mora.

The transcription of tone in this chapter will differ from what is found generally in the grammar. In particular, rather than only marking the high tones that are found in the citation forms of lexical items, the full tonal patterns of surface forms will also often be indicated as well, and a transcription system will be used which distinguishes between true low tones, which will be explicitly marked with a grave accent in both underlying and surface forms, while TBU’s treated as underlyingly unspecified for tone (which surface as low in citation contexts) will only show grave marks (where appropriate) in surface forms. Where relevant, stress will be marked
using the IPA stress marks. See section 2.5 for brief discussion of how to phonetically interpret the tonal transcription used here.

2.2.2. Accent

2.2.2.1. Words with high tones and TBU’s unspecified for tone

As first explicitly recognized by Rountree (1972b), building on Voorhoeve’s (1961) seminal work, lexical items in Saramaccan can be subdivided into a number of “tonal” classes, the largest of which is composed of words with either one high tone or two adjacent high tones in their citation form and whose other TBU’s surface predictably with either high or low tones depending on their phonosyntactic environment. Here, TBU’s of this type will be referred to as TBU’s unspecified for tone. Because sources on the Saramaccan lexicon do not generally clearly distinguish between TBU’s unspecified for tone and TBU’s which are consistently low tone (see section 2.2.3)—assuming, that is, that they mark tone at all—it is difficult to determine precisely what percentage of words in Saramaccan fall into the class of words with high tone and unspecified TBU’s, which is the focus of this section, but we estimate that it comprises, perhaps, ninety-percent or so of the language’s vocabulary.

An illustrative example is given in (2.2), which shows the underlying and surface tones in the word taánga ‘strong’ in both its citation form and within a noun phrase. In particular, what should be noted is the contrasting tonal realization of the final TBU in this word in (2.2a) versus (2.2b).
In section 2.4.1 the phrasal environments conditioning tonal alternations like the one seen in (2.2b) will be discussed in detail. Roughly speaking, we can understand the alternations as resulting from the fact that (i) some TBU’s in Saramaccan are not lexically specified for tone in any way and (ii) these TBU’s acquire their tones either through a kind of “default” rule assigning them a low tone or as a result of a process of high-tone plateauing wherein a TBU unspecified for tone, but flanked by high tone TBU’s, is realized with a high tone in a well-defined set of syntactic environments, one of which is an adjective and a following noun, as in (2.2b). In this section, we will be concerned with the patterns of tonal specification for words containing TBU’s unspecified for tone, not the details of the plateauing process, though it is primarily through observations related to plateauing that a word’s lexical tonal specifications can be reliably determined. Specifically, this plateauing process clearly distinguishes between TBU’s unspecified for tone, which will be realized as high in plateauing environments, from TBU’s specified for true low tones which never appear as high.

As discussed in detail in Good (2004), the restrictions on the lexical tone patterns of Saramaccan words indicate that the language seems most reasonably characterized as one where high tones appearing on citation forms of most words are a realization of accent (thus, making Saramaccan a language exhibiting pitch accent) but which, in some cases, are instead manifestations of true lexical tone. The situation can be most succinctly characterized by saying that
Saramaccan is primarily a pitch accent language which nevertheless contains a stratum of vocabulary which is truly tonal. Setting more theoretical aspects of this issue aside, the basic descriptive generalizations underlying this characterization are as follows: (i) a number of logically possible but unattested (or only very poorly attested) citation tone patterns, (ii) apparent manifestations of stress correlated with the presence of high tones in one class of words, but not another, and (iii) phonological evidence distinction between low tones and unspecified tones.

The rest of this section focuses on the description of the prosodic behavior of the class of words which we characterize as showing marking for accent, which is more or less the same as the class of words containing TBU’s unspecified for tone.

2.2.2.2. **Accented words with short syllables**

Table 2.1 shows all the common tone patterns for words containing TBU’s unspecified for tone for words of two, three, or four syllables. Words containing only one TBU are excluded because, as will be discussed in section 2.2.4.1, their minimal size makes it difficult (and, in some cases, perhaps impossible) to distinguish whether they are accentual or tonal. Clear examples monomorphemic words of five syllables are difficult to find in Saramaccan, and, even when they are found, appear to be semi-opaque compounds like *kelebétente* ‘painted parakeet’ (which, despite attestation of neither element as separate words, seems decomposable as *kelebé* and *tente*, with the latter form perhaps derived from Portuguese *tinta* ‘paint’ in some way), partial reduplications as in *malembélembe* ‘medicinal plant’, or words showing an apparent initial *a*-formative, as in *asubusúba* ‘plantain type’ (see section 2.2.4). Therefore, the discussion here only covers words of up to four syllables, which are relatively well attested. For ease of exposition, only words with
syllables containing one TBU will be discussed at this point. Longer syllables will be covered in section 2.2.2.3.

Three generalizations emanating from table 2.1 are of particular relevance here: (i) the lack of any low-tone TBU’s in these words, (ii) the fact that, even in cases where there are multiple high-tone TBU’s, they are adjacent, (iii) the number of attested tone patterns is never greater than the number of syllables in a word. The symbol “Ø” in the table is used as a placeholder for a TBU not specified for tone. Despite these restrictions, we should make clear at the outset that the placement of high tones in words like those in 2.1 is not phonologically predictable, and numerous minimal pairs exist which differ in their citation forms solely on the basis of placement of high-tone TBU’s (see section 2.2.2.5).

<table>
<thead>
<tr>
<th>WORD</th>
<th>TONES</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>foló</td>
<td>ØH</td>
<td>‘flower’</td>
</tr>
<tr>
<td>náki</td>
<td>HØ</td>
<td>‘hit’</td>
</tr>
<tr>
<td>makisá</td>
<td>ØØH</td>
<td>‘squash’</td>
</tr>
<tr>
<td>kamísa</td>
<td>ØHØ</td>
<td>‘loincloth’</td>
</tr>
<tr>
<td>hákísi</td>
<td>HHØ</td>
<td>‘ask’</td>
</tr>
<tr>
<td>alukútú</td>
<td>ØØØH</td>
<td>‘soursop (fruit)’</td>
</tr>
<tr>
<td>afokáti</td>
<td>ØØHØ</td>
<td>‘lawyer’</td>
</tr>
<tr>
<td>minísíti</td>
<td>ØHHØ</td>
<td>‘minister’</td>
</tr>
</tbody>
</table>

Table 2.1: Tone patterns on accented words

The restricted range of patterns for tones in words of the type seen in table 2.1 suggests a descriptive analysis treating them as marked for accent rather than tone since there is nothing to
suggest a paradigmatic contrast among different tonemes. Rather, we see a syntagmatic contrast where part of a word is signaled for a kind of prominence, most saliently realized via a high tone. There are some complications to this analysis, in particular involving words with high-tone on two TBU’s. However, these can be clarified by proposing a specific accentual analysis for these words. The schematizations in 2.3 illustrate the common patterns for words of two, three, and four syllables. The schematizations in 2.4 illustrate how these patterns can be analyzed in terms of treating one TBU has being marked for syntagmatic prominence (where an “*” is being used as a prominence marker).

(2.3)  
<table>
<thead>
<tr>
<th></th>
<th>2-σ words:</th>
<th>CVCV</th>
<th>CVCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>3-σ words:</td>
<td>CVCVCV</td>
<td>CVCVCV</td>
</tr>
<tr>
<td>b.</td>
<td>4-σ words:</td>
<td>CVCVCVCV</td>
<td>CVCVCVCV</td>
</tr>
</tbody>
</table>

(2.4)  
<table>
<thead>
<tr>
<th></th>
<th>2-σ words:</th>
<th>CVCV</th>
<th>CVCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>3-σ words:</td>
<td>CVCVCV</td>
<td>CVCVCV</td>
</tr>
<tr>
<td>b.</td>
<td>4-σ words:</td>
<td>CVCVCVCV</td>
<td>CVCVCVCV</td>
</tr>
</tbody>
</table>

As illustrated in (2.4), the tone patterns of words like those in table 2.1 can be described in terms of a prosodic system which makes use of final, penultimate, and antepenultimate accent. A high tone on the accented TBU then becomes one of the manifestations of accent. There is an additional complication insofar as, in words showing antepenultimate accent, a high tone appears not only on the accented TBU but also on the penultimate TBU. This pattern would be problematic for an accentual analysis of these words if tone patterns like (CV)CVCVCV were robustly
attested, but, in fact, they are not. Rountree, Asodanoe & Glock 2000 actually do transcribe many words with such a pattern. However, while we have not systematically verified the tones on all of these, many of those we have checked turn out to have been mistranscribed or semi-analyzable complex morphological structures, though there do appear to be some genuine exceptions (see section 2.2.4). (The dictionary, however, should not be strongly faulted too strongly in cases where it fails to transcribe penultimate high tones in words with antepenultimate accent since the fact that they have little role in marking contrast makes their distribution largely irrelevant outside of academic studies.) As will be discussed in section 2.2.2.4, one way to analyze the appearance of two high-tones in words with apparent antepenultimate accent is to appeal to aspects of the metrical structure of these words.

In table 2.2, we give more examples of the words exhibiting the tonal patterns for two- and three-syllable words schematized in (2.3). Four-syllable words are not included because there are relatively few examples. However, we will see in 2.2.2.3, this is due to a relative lack of words with four short syllables. When we look at words with four TBU’s, the patterns of final, penultimate, and antepenultimate accent (counting by TBU, not syllable), seen in (2.3) are fairly well attested.
### Accented words with “heavy” syllables

We use the term “heavy” syllables here informally to refer to cases where two orthographic vowels appear directly adjacent to each other. As discussed in section 1.1.3.3, it is not clear when these should be interpreted as true heavy syllables as opposed to two distinct syllable nuclei where the second syllable has no onset consonant. However, understanding the way that the accentual system of Saramaccan operates with respect to heavy syllables does not require resolution of this issue. Rather, the generalizations involving accentual placement in final, penultimate, or antepenultimate position extend straightforwardly to words with heavy syllables if we count from the end of the word by TBU rather than syllable. Relevant examples are given in table 2.3.
The patterns seen in table 2.3, in fact, suggest that the Saramaccan accentual system may be better understood in terms of units of syllable weight, i.e., moras, rather than syllables. Of course, the extent to which such an analysis could be considered preferable hinges on how one analyzes heavy vowels themselves.
While there are relatively few examples, the basic patterns seen in table 2.3 for four-TBU words extend to five-TBU words—that is, one finds cases of final, penultimate, or antepenultimate accent but not preantepenultimate or initial accent. Some relevant examples include: *anaktapú* ‘burlap sack’, *apeesína* ‘orange’, and *kookóódă* ‘plant type’. Some possible cases of these patterns found in, for example, Rountree, Asodanoe & Glock (2000), are actually compounds, and it may be the case that at least some apparent monomorphemic five-TBU words fitting these patterns are diachronically derived from now opaque compounds as well.

In table 2.4, we give further examples of words containing heavy syllables exhibiting the patterns seen in table 2.3.
<table>
<thead>
<tr>
<th>ACCENT</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ØH</td>
<td>dāā ‘rum’, dī ‘three’, kaf ‘fall’, peé ‘play’, se ‘ant type’</td>
</tr>
<tr>
<td>ØØH</td>
<td>baasá ‘embrace’, djaat ‘bathing area’, kaabá ‘charcoal type’, mandoó ‘bird type’, pooti ‘poor’</td>
</tr>
<tr>
<td>HHØ</td>
<td>féfi ‘five’, kánkúu ‘amulet type’, kókó ‘shell’, kóoko ‘yellow’, sáápi ‘careful’</td>
</tr>
</tbody>
</table>

Table 2.4: Accented words containing heavy syllables

Though we have not done a rigorous study, looking at words both with only light syllables and with heavy syllables, our impression is that penultimate TBU accent is most frequent, followed by final TBU accent, with antepenultimate TBU accent the least common (even when two-syllable words are not included in the count).

2.2.2.4. Manifestations of stress and possible foot structures

While pitch is impressionistically the most prominent cue for accent in Saramaccan, there is also evidence for the presence of stress in the language, whose appearance can be predicted from the position of the pitch accent. (See Good 2004:12–20 for additional discussion of stress in
Saramaccan including a critique of aspects of Rountree 1972a’s description of stress, which apparently adopts a different sense of stress than the one used here.) Specifically, the syllable containing the TBU marked for pitch accent, will also receive a primary stress. The stress is realized both as perceptual prominence and through lengthening and reduction rules, where stressed syllables can be lengthened under emphasis (e.g., when a word is repeated carefully in elicitation) and unstressed syllables can be shortened (especially during normal speech).

The most important difference between the placement of pitch accent and stress is that pitch accent is manifested on TBU’s whereas stress is manifested on syllables. Therefore, there can be pitch accent/stress “mismatches” in words of certain shapes. The schematizations in (2.5) give the placement of stress with respect to tone in words containing short syllables.

(2.5) a. 2-σ words: CV'CV ’CVCV
b. 3-σ words: CVCV'CV CV'CVCV ’CVCVCV
c. 4-σ words: CVCVCV'CV CVCV'CVCVCV CV'CVCVCV

One of the easiest places to see the mismatch between pitch accent and stress is in words with antepenultimate accent when the antepenultimate and penultimate vowels are spread across two syllables. Such words show high tones on both the antepenultimate and penultimate TBU’s, but stress is only found on the antepenultimate syllable. The data in (2.6) gives examples of specific words instantiating the patterns given in (2.5). (These words are glossed in table 2.1.)

(2.6) a. 2-σ words: fo'ló ’náki
b. 3-σ words: maki'sá ka'mísa ’hákísi
One additionally sees the mismatch between pitch accent and stress in words containing VV or VV sequences, where the high tone associated with the pitch accent is associated with only one half of a long vowel. Based on impressionistic evidence, VV syllables are always stressed and VV are stressed in cases where the high is derived from penultimate accent, as opposed to being the second high-tone TBU in a word with antepenultimate accent. Thus, one has words like 'toóbi ‘trouble’ and sumˈɛɛ ‘smell’ where the contoured heavy syllable is also stressed as opposed to a word like 'síkíi ‘body’, where the high tone of the contoured heavy syllable is the second high tone associated with antepenultimate accent and, therefore, not stressed. Again based on impressionistic evidence, sequences of “extra-long” vowels (orthographically represented as three-vowel sequences) like beέɛ ‘bread’, appear to be stressed if they contain an accented TBU.

In words of sufficient length, there are additional impressionistically stressed syllables on alternating syllables preceding or following the syllable whose stress coincides with pitch accent. Relevant examples, drawing on the words given in (2.6) are given in (2.7). An IPA secondary stress mark ("ˌ") is used to mark these syllables, but this should not be taken to imply that a clear distinction between primary and secondary stress has been established in the language.

(2.7) a. 3-σ words: ˌmakiˈsá ˌˈhákfˌsí

b. 4-σ words: ˌalukuˈtú ˌˌafόˈkάtɪ ˌmiˈnisíˌti

The patterns in (2.6) suggest a characterization of Saramaccan wherein words are parsed into (moraic) trochaic feet based on the position of the accented TBU. Thus, for example, the words
in (2.5) would have foot structures as in (2.8) where parentheses are used to mark off feet and “<” and “>” mark off syllables not parsed into feet. As seen in (2.8) such an analysis implies the possibility of defective feet at the right edge, but not the left edge, of a word. An analysis along these lines allows us to describe the environment for the appearance of high tones in two TBU’s in terms of foot structure: high tones appear in both TBU’s of any non-final foot. (In fact, given the independent presence of a rule lowering a final high-tone TBU in utterance-final contexts—see section 2.4.2—this rule could even be taken as applying to all feet but would be overridden by this intonational process in final feet.)

(2.8)  

| a. 2-σ words: | <fo> ('ló) (ˈnáki) |
| b. 3-σ words: | (ˌmaki)(ˈsá) <ka> (ˈmísa) (ˈhákí),(si) |
| c. 4-σ words: | <a> (ˌluku)(ˈtú) (ˌafo)(ˈkáti) <mi> (ˈnísí),(ti) |

We introduce the idea that Saramaccan accented words can be parsed into feet in order to suggest it as an analytical possibility, but we will not explore it in detail here since crucial evidence for it—the possibility of multiple stresses on a word—is based largely on impressionistic data and verifying its accuracy would seem to require instrumental study given the general fragility of analyses of accent systems based purely on linguists’ perceptions (in particular, linguists who are not native speakers of the language in question). In fact, this criticism applies to our description of stress in general in Saramaccan, meaning the points raised here should be taken more as initial suggestion than a definitive analysis. (Fortunately, the tonal cue for pitch accent is less subject to misapprehension.)
However, as mentioned above, there is also evidence for stress in Saramaccan involving vowel lengthening and shortening which is less susceptible to misinterpretation. The conditions under which such lengthening and shortening occurs do not allow us to verify all aspects of the impressionistic analysis, but they are helpful in some cases. In particular, non-final stressed vowels can be lengthened under emphasis and non-final unstressed vowels can be shortened. In the case of high vowels in $sIT$ or $TI$s sequences (where $T$ represents a voiceless stop), this shortening has even been observed to render the high vowel as little more than a release.

To take some examples, under emphasis in elicitation contexts, a word like $s\dddot{a}kása$ ‘living room’ can be pronounced along the lines of $sá:kása$. (For lack of instrumental data, we cannot say whether the long $a$ in such an utterance can be associated with the same phonological category as what is generally represented here as an $aa$ sequence.) Furthermore, the $a$ in the second-syllable of such a word is notably shorter in articulation than the other two $a$’s. As just mentioned, this reduction is particularly salient in words like $síkísi$ ‘six’, $b\dddot{o}kúsu$ ‘box’, or $mínsíti$ ‘minister’ where the reduction of the penultimate high vowels (here taken not to be accented—see 2.4) can render them almost inaudible. (This reduction may be indicative of the influence of Sranan on some Saramaccan speakers insofar as clusters like $ks$ or $st$ are permissible in that language.) If we take such lengthening to be associated with stress and shortening with lack of stress, then these phenomena can be used as more concrete evidence for stressed/unstressed syllables in Saramaccan. They are perfectly consistent with the analysis based on impressionistic evidence but are not easily applicable to all environments, for example final unstressed syllables can never be shortened to the same degree as medial high vowels.
2.2.2.5. Minimal pairs

There is no question that accent in Saramaccan (however it may be analyzed) must involve lexical specification on some level. This is because of the presence of numerous minimal pairs involving the placement of accent. Furthermore, to the extent that the placement of accent is predictable, this can only be done using diachronic, not synchronic, criteria (for example, by knowing what language was the ultimate source of a given word).


We are not aware of any minimal pairs involving words containing the lower mid vowels, but we believe this is purely accidental, arising from the fact that they are less common, in general, than the other vowels. Furthermore, as will be seen in section 2.2.3.3, there are minimal pairs between accentual words with these vowels and tonal words.
2.2.3. Tonal words

2.2.3.1. High tones and low tones

Section 2.2.2 focused on words containing TBU’s unspecified for tone. As was seen, such words also contain TBU’s which appear in citation contexts with high tones, and these high tones were seen to be readily viewed as manifestations of pitch accent. However, the Saramaccan prosodic system presents significant descriptive complications because of the presence of a class of words which do not appear to be marked for accent at all but, rather, are truly tonal. The first important characteristic of this class of words is that, rather than exhibiting a distinction between high-tone TBU’s and TBU’s unspecified for tone, there is, instead, an apparent opposition between high-tone TBU’s and low-tone TBU’s.

In citation context, TBU’s unspecified for tone and low-tone TBU’s are indistinguishable. However, in other contexts, most notably in environments where tonal plateauing is found (illustrated in (2.2b) and discussed in detail in 2.4.1) these two classes of TBU’s are readily distinguished. This can be seen in the contrast between (2.9a) and (2.9b).

(2.9)  

a. \( \text{Dí wómi kulé alá.} \rightarrow \text{Dí wómi kúlé àlá.} \)  
DEF man run over.there  
“The man runs there.”

b. \( \text{Dí káímà kulé alá.} \rightarrow \text{Dí káímà kúlé àlá.} \)  
DEF crocodile run over.there  
“The crocodile runs there.”

(Rountree 1972a:316)
The last word of a subject and following verb form a syntactic environment in which high-tone plateauing can take place if the right phonological conditions are met. These conditions are that two high-tones (regardless whether their source is pitch accent or true tone) flank one or more TBU’s unspecified for tone. These conditions are met in (2.9a) and, thus, the last TBU of the subject wómi ‘man’ and the first TBU of the verb kulé ‘run’ are both realized with high tone. By contrast, in (2.9b) plateauing is not found. This is because the last two TBU’s of the word káimà ‘crocodile’ are marked for low tone and not merely unspecified for tone. Their tones are always realized as low, and they block high-tone plateauing. Thus, not only are the final tones of káimà not realized as high in (2.9b), they also prevent the first TBU of kulé from being realized with a high tone.

As will be shown, the distinction between words like wómi and káimà goes beyond details of tonal specification. Rather, it is indicative of a more fundamental “cut” in Saramaccan grammar between words marked for accent and those which are apparently purely tonal and give no evidence for entering into an accentual system. Table 2.5 gives examples of words containing no TBU’s unspecified for tone showing a range of tone patterns involving high tones and low tones. Clear examples of some logically possible tone combinations have yet to be found. In some cases, as with the lack of an unambiguous instance of a word with a single high tone TBU, the issue is not a matter of surface tonal patterns but, rather, analytical indeterminacy, as discussed in section 2.2.3.2. In other cases, a word with the pattern is recorded in other sources, but we have not been able to verify its tones with our consultants. This is the case, for instance, with éndôle ‘stork type’, a word which was simply not known when checked with two consultants. Similarly, while one consultant gave the tones indicated in table 2.5 for the word for ‘woodpecker’ (also found in Rountree, Asodanoe and Glock (2000)), others showed a pattern that appeared best
characterized as *tótomboti*, showing an exceptional ØHØØ pattern (see section 2.2.4) with stress on the high-toned TBU. Factoring out dialectal or idiolectal issues, we should note that there has never been systematic lexicographic investigation of Saramaccan wherein words surfacing with a mix of high and low tones in elicitation contexts have been checked to see whether their low tones are subject to plateauing.

<table>
<thead>
<tr>
<th>WORD</th>
<th>TONES</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>bà</td>
<td>L</td>
<td>‘carry’</td>
</tr>
<tr>
<td>jàà</td>
<td>LL</td>
<td>‘sow’</td>
</tr>
<tr>
<td>kédé</td>
<td>HH</td>
<td>‘box’</td>
</tr>
<tr>
<td>bòsò</td>
<td>LL</td>
<td>‘loosen’</td>
</tr>
<tr>
<td>kâmìà</td>
<td>HLL</td>
<td>‘crocodile’</td>
</tr>
<tr>
<td>lògòsò</td>
<td>LLL</td>
<td>‘turtle’</td>
</tr>
<tr>
<td>tótómbòtl</td>
<td>HHLH</td>
<td>‘woodpecker’</td>
</tr>
<tr>
<td>séségùùśé</td>
<td>HHLLH</td>
<td>‘fish type’</td>
</tr>
</tbody>
</table>

Table 2.5: Words fully specified for tone

Words like those in 2.3 demonstrate that a fairly wide range of high and low tone combinations are attested on Saramaccan lexical items. The existence of words with only low tones is important in this context insofar as their lack of any high tone means that none of their TBU’s are candidates for being marked for pitch accent of the sort described for words with TBU’s unspecified for tone in section 2.2.2.
As discussed in section 2.2.2, we do not have access to data which would allow us to reliably state what percentage of words in Saramaccan are fully tonal, though our impression is that such words comprise perhaps around ten percent or less of the language’s vocabulary.

2.2.3.2. Indeterminacy in determining if a word is marked for tone or accent

A split prosodic system raises descriptive difficulties not found in languages with more consistent prosody, and we should briefly comment on the conventions we have adopted regarding the possibility of analytical indeterminacy of a word’s prosodic type here.

Words containing just one high-tone TBU, like hɛ̃́, for instance, appear to be equally well-treated as being specifically marked with a high tone on their one TBU or as marked for accent on that TBU, which is consistently realized as a high tone. Perhaps future research will discover principles favoring one of these analyses over another, but we are not aware of any at this point.

A similar issue arises for some words that only ever surface with a single low-tone TBU. A word like kù ‘with’, for example, could presumably be analyzed as being simply unaccented and not ever being subject to plateauing for syntactic reasons (see section 2.3.2.3), making it impossible to distinguish its low tone resulting from a lack of accent from a true low tone. At the same time, there are other words with low-tone TBU’s which could not be analyzed this way, such as bà ‘carry’. Being a verb, this word would not be expected to be unaccented, and it can also appear in environments otherwise associated with plateauing, making an analysis of it as being specified with a low tone the more straightforward one. For consistency, we treat all words with a single TBU that always appears with a low tone as being specified for their tone in the transcriptions in this chapter, but, again, leave open the possibility that more sophisticated analysis may provide a way to show that some words in this class are better treated as unaccented.
There are also cases of words with more than one TBU which, for syntactic reasons, do not allow for straightforward determination regarding whether they should be analyzed tonally or accentually. For instance, there is only one preposition containing more than one TBU, bóítì ‘except’. It never undergoes plateauing, but this could be reasonably seen as deriving from general phonosyntactic principles or as a result of it actually having an underlying form bóítì (see section 2.3.1.3). We treat it as being specified for accent here since its surface shape is consistent with a word with accent on the antepenultimate TBU, an otherwise well-attested class in Saramaccan, though this is clearly weak evidence. Similar issues also arise with respect to two elements that appear at the end of the noun phrase akí ‘here’ and alá ‘over.there’, which will be discussed in section 2.3.1.2, and the word éé ‘if’. In the case of words with multiple syllables, however, more detailed investigation into the phonetic and phonological properties of stress in Saramaccan may reveal criteria allowing less equivocal assignment of such words to either the accentual or tonal class (see sections 2.2.2.4 and 2.2.3.4). We should note that, if words like these are treated as tonal rather than accentual, they would fill in notable logical gaps in the data presented in table 2.5, specifically LH (akí and alá) and HL (éé).

2.2.3.3.  Minimal pairs and tonal features of morphological processes

One of the clearer areas of Saramaccan grammar where words surfacing with low tones can be opposed to words surfacing with high tones in a way that suggests a paradigmatic opposition between the two is in the distinction between what are here called the subject series and the tonic series of pronouns (see chapter 5). These are given in table 2.4.
As seen in table 2.4, for four of the six of the pronouns, the sole formal distinction between the subject and tonic series involves tone. Thus, the pronominal system offers one possible set of minimal pairs evincing a paradigmatic distinction between high tone and low tone. There are comparable minimal pairs outside of the pronominal system, for example kù ‘with’ vs. kú ‘vagina’ and tù ‘also’ vs. tú ‘two’. However, because one-TBU high-tone words are open to an analysis as being accented, it would be possible to offer an alternative analysis of the pronominal patterns as well these minimal pairs in terms of an accented/unaccented distinction (see section 2.3.2.2). And, in fact, that is presumably the analysis one would adopt without question were there not additional evidence for the evidence of true tonal opposition in Saramaccan.

Less ambiguous evidence for the presence an opposition between words marked for pitch accent and those marked for true tone in Saramaccan comes from the phonological behavior of the agentive suffix -ma (see chapter 3 for further discussion). This suffix appears with a low tone when appearing immediately after a high-tone TBU or a TBU unspecified for tone but with a high tone when following a true low-tone TBU, as illustrated by the data in table 2.5. (The forms in table 2.5 are independently attested except for káímá, which was specifically elicited for purposes of illustration, hence the lack of a translation, though it could be translated as some-
thing like “alligator man”. This suffix thus offers further evidence for a distinction between low-tone TBU’s and TBU’s unspecified for tone by suggesting a clear contrast in their phonological influence on a following element.

<table>
<thead>
<tr>
<th>WORD</th>
<th>TONES</th>
<th>GLOSS</th>
<th>TRANSLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>lúku-mà</td>
<td>HØL</td>
<td>‘look-AG’</td>
<td>“spectator”</td>
</tr>
<tr>
<td>koósu-mà</td>
<td>ØHØL</td>
<td>‘skirt-AG’</td>
<td>“woman”</td>
</tr>
<tr>
<td>paí-mà</td>
<td>HØL</td>
<td>‘give.birth-AG’</td>
<td>“child-bearer”</td>
</tr>
<tr>
<td>lègèdè-mà</td>
<td>LLLH</td>
<td>‘lie-AG’</td>
<td>“liar”</td>
</tr>
<tr>
<td>káimà-mà</td>
<td>HLLH</td>
<td>‘crocodile-AG’</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 2.5: Agentive nouns

As reported by Voorhoeve (1961:155), there is comparable evidence involving the formative wà which can form nouns from other parts of speech. One finds, for example, forms like ótowà ‘other one’, búnwà ‘good one’, and kuléwà ‘flowing one’ against tåkwà ‘evil one’ and bòswà ‘loose one’.

While we are not aware of any clear-cut (i.e., non-monomoraic) cases of minimal pairs of true tone words with each other, there are a number of minimal pairs for such words with words marked for accent. Examples drawn from Rountree, Asodanoe, and Glock (2000) include: àkàtà ‘headpad’ vs. akàta ‘crossed legs’, bàkà ‘menstruation’ vs. baàka ‘black, bàndjà ‘side’ vs. bandjá ‘dance type’, bòbù ‘roughest part of rapids’ vs. bubú ‘jaguar’ and jàa ‘broadcast’ vs. jáa ‘year’. There is also the minimal quadruplet tjàkà ‘rash type’ vs. tkakà ‘rattle’ vs. tjàka ‘too
short’ vs. tjáká ‘sudden and quick (ideophone)’. While the opposition between tjàkà and tjáká may appear to be minimal pair for two unambiguously fully-toned words—since neither word shows patterns associated with pitch accent—this is not an ideal example because the special prosodic characteristics ideophones (see section 2.2.3.5) make their status as appropriate comparanda with non-ideophones in cases like this unclear.

2.2.3.4. Lack of evidence for stress

Words fully marked for tone have a final feature which distinguishes them from words marked for accent: The lack of any evidence that their syllables participate in a stressed/unstressed opposition. This is true both in impressionistic terms and, to the extent that this can be tested, using phonological criteria as well.

For example, no syllable in words like lògòsò ‘turtle’ or lègèdè ‘lie’ is impressionistically stressed. To the ears of a native English speaker, a word like sèségùùsè ‘fish type’, the final syllable sounds possibly stressed, but this is presumably due to English’s general association of high pitch with stressed syllables and the fact that this syllable is preceded by low-toned TBU’s. (Furthermore, instrumental evidence from one speaker uttering the word sèségùùsè did not indicate any significant increase in amplitude on that syllable.) Less ambiguously, one has a word like pùkùsù ‘bat’ which does not allow any kind of medial vowel reduction like that seen for a word like bòkùsu ‘box’, despite a similar segmental environment. In general, the lengthening and reduction rules described for accented words in section 2.2.2.4 have not been observed in truly tonal words. Such observations are significant to the extent that they indicate that tonal words do not just differ from accented words in their deployment of pitch. Rather, they do not show any
evidence of the opposition between prominent and non-prominent positions associated with accent.

2.2.3.5. Ideophones

Though the prosodic properties of ideophones have not been explored in detail, they are known to have some exceptional prosodic features (much as they have exceptional segmental features—see section 1.2.3). The first is a strong tendency to consist solely of high-tone TBU’s or low-tone TBU’s. Thus, the prosodic patterns exemplified in ideophones like fāā ‘very white’, kūlūlū ‘straight’, gbītī ‘many’, and sīi ‘close quietly’ are typical. Attested, but much less common, are ideophones like bāngūlā ‘walking drunkenly’ and vùngūvùngù ‘floating in space’ (drawn from Rountree, Asodanoe, and Glock (2000)). The syntactic properties of ideophones (see section 14.7), wherein they are somewhat “detached” from clausal phrase structure means that they do not participate in the process of tonal plateauing exemplified in (2.2b) nor are they subject to the same intonational processes as non-ideophones. Because this means that their surface tones are never observed to change, we describe them together with other words classified as being specified for tone here.

The results of Good (2006) suggest that the low tones in ideophones are phonetically the same as low tones found elsewhere in Saramaccan, but that high tones in ideophones are phonetically distinct and, perhaps, better classified as “super-high”.

2.2.4. Word-level prosody: Exceptions

While the description given above covers most of the prosodic patterns in the Saramaccan lexicon, there are a number of words that are exceptional in various ways. On the one hand, there are
words with unspecified TBU’s which do not conform to the patterns described in section 2.2.2. Examples include: *fóótó* ‘photograph’, which exceptionally has three high-tone TBU’s and preantepenultimate high tone; *hékísee* ‘sneeze’, which exceptionally has a preantepenultimate high-tone TBU as well as an antepenultimate high tone without a penultimate one; *bobíete* ‘undeveloped maripa fruit’, and which exceptionally has an antepenultimate high tone without a penultimate one, and *adjáási* ‘spider’, which shows the same irregularity as *bobíete*. (These examples have been verified with consultants. So, their exceptional status seems clear.)

On the other hand, there are also a handful of words identified as containing both TBU’s unspecified for tone and true low tone TBU’s. The known words of this type all begin with a vowel and involve an initial TBU (or set of TBU’s) unspecified for tone followed by TBU’s fully specified for tone. Examples include: *anákitá* ‘biting ant’, *asoóbònú* ‘taboo name for cow’, *obílògbé* ‘snake type’. (The first of these has been verified with consultants.) Voorhoeve (1961:154) lists some others, and all known examples begin with *a* except for the last word in the list just given (see 3.2.3 for further discussion of these words). The initial vowels of these words along with their relatively long form of—always four or more syllables—as well as the fact that they all lack obvious European etymologies suggests that they may derive from West African compounds. This would provide a historical explanation for their exceptional tonality.

A number of other apparent exceptions can be explained via apparent morphological complexity of a word, or at least semi-analyzability. For instance, one finds words like *bákaté* ‘later’, *fésité* ‘antiquity’, *líbité* ‘lifetime’, and *písité* ‘a while’, which all exceptionally show antepenultimate, but not penultimate, high tone, but also all appear with an element *tè*, clearly relatable to *tè* ‘time’. Many other apparent exceptions in Rountree, Asodanoe, and Glock (2000) are easily analyzed as compounds (see section 2.3.1.1).
While the tone patterns on reduplicated forms generally follow what is observed in compounds (see section 2.3.1.1), as first observed by Voorhoeve (1961:fn.15) (see also Rountree 1972a:317–318), there are some reduplicated forms whose tone patterns diverge from what might otherwise be expected, though this pattern appears to be limited to frozen or semantically irregular reduplications. For example, the frozen reduplication *kpêjêkpêjê* ‘newborn’ shows two low tones on its last syllables when elicited, but appears with all high tones in the expression *kpêjêkpêjê mû* ‘newborn baby’. This is most consistent with positing an underlying tonal representation of the word as HHØØ, but there is no way to derive this if one assumes that both parts of the reduplicated structure have the same tonal representation. Other examples of this pattern include: *fiôfio* ‘spirit revenge’, *jangâjangâ* ‘fish type’, and *sîndjàsîndjà* ‘grey’ (presumably related to *sîndja* ‘ashes’), and *wâtéwâtê* ‘immediately’ (which is related in some way to *wâté* ‘right now’). (Whether these words end in specified low tones or TBU’s unspecified for tone has not been systematically verified, but we suspect they will mostly show the latter pattern.) While this pattern appears restricted to frozen or opaque reduplicated forms, it is not the case that all irregular reduplications follow it. For instance, it is not seen in words like *mosimósí* ‘mouse’ or *wasiwâsi* ‘wasps’ (both of which only appear reduplicated in Saramaccan). Unlike a word like *kpêjêkpêjê* (whose HHØØ tone pattern has been verified with consultants), while these words are irregular in the sense of being frozen reduplications, their ØØHØ tonal form otherwise conforms to broader patterns of Saramaccan prosody. See section 3.1.1.6 for additional relevant discussion.
2.3. Phrasal prosody

Saramaccan phrasal prosody is dominated by a process of high-tone plateauing (illustrated above in (2.2)) wherein TBU’s unspecified for tone in certain syntactic contexts are realized as high tones when flanked by high tones. Example (2.10) repeats example (2.2) for purposes of illustration. As indicated, a number of the examples in this section are drawn from other authors.

(2.10)  a.  \textit{taánga} \rightarrow \textit{tàángà} \textit{‘strong’}
          
        b.  \textit{dí taánga wómi} \rightarrow \textit{dí tàángá wómì}

        DEF strong man

        “the strong man”

Example (2.10a) shows the citation form of the word \textit{taánga} ‘strong’, which is a word associated with penultimate accent. In (2.10b), the first TBU unspecified for tone surfaces as low, and the last as high. The latter is affected by high-tone plateauing, but the former is not. This is because, while both are flanked by high tones and, therefore, in the right phonological environment, only the latter tone is also in the right syntactic environment, which, in this case, can be characterized informally as “a noun and the word immediately preceding it within the noun phrase”.

Example (2.11) repeats example (2.9) to show how words with TBU’s specified for low tone interact with high-tone plateauing. As can be seen, in the contrast between the surfacing form of the first TBU of \textit{kulé} ‘run’ in (2.11a) vs. (2.11b), even though the environment of verb and the word preceding it in the subject noun phrase form the right syntactic environment for plateauing,
the low tone TBU in a word like *kâimà* ‘crocodile’ blocks the process by virtue of not providing the right phonological environment. In the sections to follow, further examples of the non-application of plateauing when the requisite phonological environment is lacking will be given.

(2.11) a. \(\text{Dí wómì kulé alá.} \rightarrow \text{Dí wómì kúlé álá.}\)

DEF man run there

“The man runs there.” (Rountree 1972a:316)

b. \(\text{Dí kâimà kulé alá.} \rightarrow \text{Dí kâimà kúlé álá.}\)

DEF crocodile run there

“The crocodile runs there.” (Rountree 1972a:316)

Section 2.3.1 discusses tonal plateauing phenomenon, listing all environments where it is known to occur and suggesting some descriptive generalizations. Section 2.3.2 then discusses the more difficult case of tone raising in serial verb constructions, which are affected both by high-tone plateauing as well as other less straightforwardly phonological effects. In the data given in this section, processes classified as intonational (see section 2.4) are not transcribed. Accordingly, surface tonal realizations may differ from those indicated. The most prominent intonational process in this regard is lowering of a final high tone which, in some cases, can cause tonal plateauing not to occur when it might otherwise be expected.
2.3.2. **Tonal plateauing**

We begin by discussing a range of syntactic environments, providing data relevant to establishing whether high-tone plateauing does or does not occur within them. Plateauing has not been systematically explored in all imaginable syntactic configurations, especially those involving clause combinations. Accordingly, the absence of an environment in the discussion here should not be taken to mean that plateauing is not found. See also section 2.5 for some difficulties involved in testing for the presence of plateauing in certain environments.

2.3.2.1. **Compounds and regular reduplication**

Compounds form a syntactic plateauing environment as shown by the examples in (2.12). As seen in (2.12d), this environment can span multiple words. The same prosodic pattern is also found in reduplicated adjectives (2.12g) (see section 6.2).

\[(2.12)\]

\[\begin{align*}
\text{a. } & \quad \text{beéi gáási} \rightarrow \text{bééí gáási} \\
& \quad \text{eyeglasses} \quad \text{glass} \\
& \quad \text{“eyeglass lens”}
\end{align*}\]

\[\begin{align*}
\text{b. } & \quad \text{hédí uwíi} \rightarrow \text{hédí úwíi} \\
& \quad \text{head} \quad \text{hair} \\
& \quad \text{“hair (of head)”}
\end{align*}\]

\[\begin{align*}
\text{c. } & \quad \text{boóko jési} \rightarrow \text{bòókó jésì} \\
& \quad \text{break} \quad \text{ear} \\
& \quad \text{“deaf”} \quad \text{(Rountree, Asodanoe & Glock 2000)}
\end{align*}\]
As discussed in section 2.2.1, there are also prosodically irregular reduplicated forms which do not follow the pattern seen in (2.12g).

2.3.2.2. Noun phrase

Within a noun phrase, a noun and its preceding word form a plateauing environment, as in (2.13). The elements appearing in this position can be articles, adjectives, and other kinds of modifiers that can immediately precede a noun. Example (2.13e) shows the lack of plateauing when the relevant phonological environment is not met. The prosodically irregular noun in (2.13d) seems like a good candidate for having derived from a West African compound form (see section 2.2.4).
Elements before the noun generally do not plateau with each other. For example, an article and a following adjective do not trigger plateauing, nor two adjectives, as in (2.14).

(2.14) a. \( \text{dí t̩ãŋa w̩òmì} \rightarrow \text{dí t̩ãŋá w̩òmì} \)

DEF strong man

“the strong man”
b. \( \text{dí gāā wósù} \rightarrow \text{dí gāā wósù} \)
   DEF big house
   “the big house”

c. \( \text{dí lánga hánsó wómì} \rightarrow \text{dí lángà hánsó wómì} \)
   DEF tall handsome man
   “the tall, handsome man” (Rountree 1972a:321)

Modifiers denoting nationality, however, do form a plateauing environment with a preceding
derterminer, as in (2.15). This suggests they should either be treated as a special class of adjectives or as forming compounds with the noun they modify and, therefore, not having a syntactic
adjectival function.

(2.15) a. \( \text{sikísí olánsi wómì} \rightarrow \text{sikísí ólánsí wómì} \)
   six Dutch man
   “six Dutch men” (Rountree 1972a:319)

b. \( \text{dí taángà améekà wómì} \rightarrow \text{dí tāángà áméékà wómì} \)
   DEF strong American man
   “the strong American man”

While most prenominal modifiers behave the same as the article with respect to plateauing, at
least one modifier \( \text{ótó} \) ‘other’ has apparently exceptional behavior (see also Kramer 2007). Relevant
eamples are given in (2.16).
In (2.16a), if we assume the basic tonal pattern of óto is HØ, as given in previous descriptions, then the word plateaus with a following adjective, which is different behavior from clear adjectives as exemplified in (2.14b). However, in (2.16b) óto does not plateau with a following numeral. More surprisingly, the word has been described as appearing with a final high tone when followed by a word specified with low tones, in a process that cannot be plateauing as described here since the relevant phonological conditions are not found. (We have not verified these facts ourselves.) This pattern is comparable to effects found in serial verb constructions where such “spurious” high tones are also found. It is difficult to make sense of data like that in (2.16) in the context of the rest of the Saramaccan prosodic system, and we offer no specific analysis. It could be the case the basic tonal pattern of óto has been misanalyzed, or, perhaps, we are dealing with an area of the grammar where the clash between Saramaccan’s tonal and accentual prosodic patterns makes a tonal transcription with the level of precision indicated in (2.16) inadvisable an issue that will be discussed in more detail in section 2.5.
In addition to prenominal elements, plateauing is also observed between a noun and certain postnominal elements including the demonstrative dé ‘there’ and the relative pronoun dí (2.17). The two other demonstrative markers akí ‘here’ and alá ‘over there’ (see section 4.2) do not plateau with a preceding noun (see (2.18)), suggesting either morpheme-specific rules are involved with plateauing in this environment (as implied by the transcription here) or that their first TBU’s are lexically low rather than unspecified (see section 2.2.3.2).

(2.17) a. dí mujéé dé akí séépi → dí mújéé dé akí séépi
   DEF woman there here self
   “this woman here herself” (Rountree 1972a:319)

   b. dí bóto dí mì músu téi → dí bóto dí mì músu téi
   DEF boat REL 1s must take
   “the boat which I must take” (Rountree 1972a:321)

(2.18) a. dí mujéé akí ù mì → dí mújéé akí ù mì
   DEF woman here POSS 1S.T
   “this woman of mine” (Rountree 1972a:320)

   b. dí búku alá u mì → dí búkù álá ù mì
   DEF book over there POSS 1S.T
   “that book (over there) of mine”

The data presented here should be sufficient to indicate the general patterns of tonal plateauing within noun phrases, though it seems likely that some sub-patterns may have yet to be
uncovered, especially involving more grammaticalized elements. In particular, the tonal patterns involving all the possible permutations of different prenominal elements (e.g., adjectives and quantifiers) and postnominal elements (e.g., demonstrative and emphatic markers) have not been systematically explored.

2.3.2.3. **Adpositional phrase**

True prepositional phrases do not generally show plateauing effects with preceding or following elements. The most common prepositions, locative à, possessive fù, and comitative kù are all monosyllabic, showing invariant low tones, meaning this would probably not be expected on purely phonological grounds (though see section 2.2.3.2 for discussion of ambiguities regarding their analysis). There is at least one longer preposition, bótti ‘except’, which has a high tone and, therefore, in principle could form one side of a plateauing environment. As seen in (2.19), it does not exhibit plateauing with a following noun.

\[(2.19) \text{bótti koósu} \rightarrow \text{bótti kòósù}\]

except clothes

‘except clothes’ \hspace{1cm} (Rountree 1972a:321)

The data in (2.19) suggests that prepositions do not form a plateauing environment with a following noun. However, since there is only one known preposition that allows for testing this environment, the generalization cannot be considered very strong. Indeed, we are not aware of any synchronic evidence that bótti could not be analyzed as bótti—that is, as a word ending with a specified low tone.
Exceptions to this pattern are found with at least one of the special forms associated with the possessive \( f_\text{u} \), as in (2.20).

\[
\text{(2.20) } \text{dí mujéé u mí akí } \rightarrow \text{dí mújéé ú mí àkí}
\]

DEF woman POSS 1S.T here

“my woman here” (Rountree 1972a:320)

If the \( u \) of \( u \text{ mí} \) in (2.20) were to be strictly associated with \( f_\text{u} \), which is certainly the case historically, one would not expect it to show a high tone. The fact that it does has been taken as an indication that it has been realized as something like a prefix to the word \( m_\text{í} \) (Voorhoeve 1961:159). Given the generally unpredictable forms associated with the combination of \( f_\text{u} \) plus pronoun (see section 3.3.1), such an interpretation (or something like it) seems reasonable.

While Saramaccan does not have elements which are unambiguous postpositions, there are a number of locative nouns like \( l_\text{íba} \) ‘above’, \( b_\text{ásu} \) ‘underneath’, or \( b_\text{andjà} \) ‘side’, which can follow noun phrases to create larger noun phrases with locative meanings, as in (2.21). In such phrases, the locative noun plateaus with the immediately preceding word if the phonological conditions for plateauing met, which is the case in (2.21a) and (2.21b), but not (2.21c).

\[
\text{(2.21) a. } \text{dí táfà ù dí kónu lìba } \rightarrow \text{dí táfà ù dí kómú lìbà}
\]

DEF table POSS DEF king above

“the top of the king’s table” (Rountree 1972a:320)
b. \( \text{dí sitónu básu} \rightarrow \text{dí sitónú básù} \)
DEF stone underneath
“under the stone”

c. \( \text{dí wósu bàndjà} \rightarrow \text{dí wósù bàndjà} \)
DEF house side
“the side of the house”

As can be seen in (2.21a) the two elements in the plateauing relation in this construction need not have a particularly close syntactic connection. Because of the fact that the locative noun in such a construction can be understood to be the head of the noun phrase, the plateauing seen in an example like (2.21) can be straightforwardly viewed as a special case of a noun plateauing with a preceding element in its noun phrase in the way exemplified in (2.13).

2.3.2.4. Tones in the verbal complex

The future tense marker \( ó \), the imperfective marker \( tá \), and the negative marker \( á \) form a plateauing environment with the following verb (see chapter 7 for syntactic discussion of these markers). The past marker \( bì \) does not, though this is presumably not due to any morphosyntactic difference between it and the other markers but, rather, is purely an artifact of its lexical low tone.

(2.22) a. \( \text{Mì tá kulé tidé.} \rightarrow \text{Mì tá kúlé tidé.} \)
1S.T IMF run today
“I am running today.”
b.  
Mì  ó  bebé  kòfì.  
→  
Mì  ó  bébé  kòfì.  

1S    FUT  drink  coffee  

“I am going to drink coffee.”  
(Rountree 1972a:322)

c.  
Mé  á  makisá  dí  sófu  kā  kó  paáta.  
→  
Mé  á  mákisá  dí  sófú  kā  kó  páátà.  

1S.NEG  NEG  squash  DEF  soda  can  come  flat  

“I did not squash the soda can flat.”

d.  
Mì  bì  kulé  éside.  
→  
Mì bì  külé  ésidè.  

1S    PST  run  yesterday  

“I ran yesterday.”

Other preverbal auxiliary-like elements (e.g., the ló’ habitual or abilitative sá—see chapter 7) have not been systematically examined for the plateauing effects. However, based on other aspects of the plateauing, in particular those surrounding serial verbs (see section 2.3.2), one would expect them to plateau with a following verb except in cases where one finds an intervening complementizer (f)ù (see 9.2.2.1). This is the case, for example, with músu (see (2.17b)).

2.3.2.5.  Simple clauses

In monoverbal monoclusal structures, the basic pattern regarding plateauing is that the last word of a subject noun phrases and the first element of a verb complex (i.e., a verb preceded by any TMA markers) form a syntactic plateauing environment, while a verb and a following nominal object do not. Relevant examples are given (2.22) for the subject-verb environment and (2.23)
for the verb-object environment. Examples (2.22d) and (2.22e) show the non-application of plateauing when the requisite phonological environment is not found.

(2.22) a. \( \text{Dí mujée tá wáka.} \rightarrow \text{Dí mújée tá wákà.} \)
DEF woman IMF walk
“The woman walks.” \((\text{Rountree 1972a:324})\)

b. \( \text{Dí wómi, hē kulé dé.} \rightarrow \text{Dí wómi, hē kūlé dé.} \)
DEF man 3S.T run there
“The man, he runs there.” \((\text{Rountree 1972a:324})\)

c. \( \text{Dí gōō à Saamáka héi.} \rightarrow \text{Dí gōō à Sààmáká héi.} \)
DEF ground LOC Saramaka high
“The ground in Saramaka is high.”

d. \( \text{Dí lògósò kulé alá.} \rightarrow \text{Dí lògósò kùlé álá.} \)
DEF turtle run over.there
“The turtle runs there.” \((\text{Rountree 1972a:315})\)

e. \( \text{Páúlu lēgèdè} \rightarrow \text{Páúlù lēgèdè} \)
Paul lie
“Paul lies.”

(2.23) a. \( \text{Mī lápu koósu.} \rightarrow \text{Mī lápù kòósù.} \)
1S mend clothes
“I mend clothes.”
b. À náki dí tatáì. → À nákì dí tátâì.
3S hit DEF rope
“He hits the rope.”

Kofì find Amba
“Kofi found Amba.”

Pronominal objects, however, do form a plateauing environment with a preceding verb, suggesting that they have some sort of clitic status. This dovetails with some of the facts regarding their segmental patterns discussed in section 5.2.

(2.24) Dí sitónu tá náki mí à mí fútù. →
Dí sítónú tá nákí mí à mí fútù.
DEF stone IMF hit 1S.T LOC 1S.T foot
“The stone hits me on my foot.” (Rountree 1972a:323)

2.3.2.6. Adverbial expressions
Modifiers with adverbial function generally do not participate in plateauing (2.25), though exceptions to this pattern have been noticed for the more frequent elements nőu ‘now’ and jèti ‘still’.
(2.25) a.  Mì wáká lóngì.  
Mì wákà lóngì.  
1S walk long  
“I walk far.”

b.  Dí wómi tá woóko taánga lóngì.  
Dí wómí tá wóókò tàángà lóngì.  
DEF man IMF work strong long  
“The man works hard and long.”  (Rountree 1972a:322)

(2.26) a.  Mì wáká étì.  
Mì wáká étì.  
1S walk still  
“I am still walking.”

b.  Mì wáká nóu.  
Mì wáká nóu.  
1S walk now  
“I am walking now.”

The word m55 ‘more’ also participates in plateauing and is a somewhat special case. It plateaus with the word it most directly modifies whether it precedes or follows it.

(2.27) a.  Mì hánso m55 í.  
Mì hánsó m55 í.  
1S handsome more 2S.T  
“I am more handsome than you.”  (Rountree 1972a:323)
b. Mì wáka hési m₃₅ í. → Mì wákà hésí m₃₅ í.
1S walk fast more 2S.T
“I walk faster than you.”
(Rountree 1972a:322)

c. Mì wáka m₃₅ hési. → Mì wákà m₃₅ hési.
1S walk more fast
“I walk faster.”

2.3.2.7. Open issues

The above examples cover a significant amount of the environments where plateauing is found, but there are still some grammatical constructions where further investigation is required. One area (briefly mentioned in section 2.3.1.4) are auxiliary-like verbal elements that appear at the beginning of the verbal complex, not all of which have been systematically examined. In addition, subordinating devices have not been systematically examined for possible plateauing effects with a following clauses, nor has the juncture between subordinate and main clauses been looked at. Furthermore, there are likely to be exceptional lexical items like those seen in section 2.3.1.6 that have yet to be uncovered.

2.3.2.8. Interaction between intonational processes and plateauing

In one area, a significant interaction between plateauing and an intonational process has been found. This is illustrated in the data in (2.28), where the final low tones in the examples depart from the transcription conventions of the rest of this section by indicating this intonational process.
As discussed in section 2.3.1.5, a noun phrase and a following verb form a syntactic plateauing environment. Example (2.28b) accordingly shows the last TBU of the subject with a high tone. By contrast, in (2.28a), this TBU appears with a low tone due to the fact that an utterance-level intonation process (see section 2.4.2) has lowered the final high tone of the sentence, sug-
gesting intonational lowering, in some sense, has “precedence” over plateauing. The same basic pattern holds for the pairs (2.28c) and (2.28d) and (2.28e) and (2.28f).

2.3.3. Tones in serial verb constructions

Serial verb constructions (see chapter 8) represent a particularly complex area in terms of their tonal properties, and their tonal patterns have been the subject of relatively extensive investigation (Good 2003, 2004; Kramer 2005). In part, their plateauing patterns can be seen to derive from a number of the more general patterns described above. In particular, adjacent serial verbs plateau with each other, in a manner comparable to what is found in compounds (see section 2.3.1.1), as seen in (2.29) (in (2.29c) the relevant interaction involves the last two verbs). In addition, serial verbs and following noun phrases do not form a plateauing environment comparable to what is found in VO structures, while noun phrases appearing between two serial verbs do plateau with a following verb comparable to the plateauing found between subjects and verbs (see section 2.3.1.5), as seen in (2.30). (Example (2.30b) illustrates the lack of plateauing when the requisite phonological environment is not found.) While their precise syntactic analysis is another matter, some auxiliary-like elements, for example músu ‘must’ in (2.17b) also behave like serial verbs with respect to plateauing.

(2.29) a. Mì hôpo kumútu à dl wōsu. →
Mi hôpú kúmútù à dl wósù.
1S get.up exit LOC DEF house
““I get up and go out of the house.”” (Rountree 1972a:324)
b.  

Mì wáka póì. →  

Mì wáká póì.  

1S walk spoil  

“I walk too much.”  

c.  

Mì makísá dí sáfu ká kó paáta. →  

Mì mákísá dí sáfù ká kó páátà.  

1S squash DEF soda can come flat  

“I squashed the soda can flat.”  

(2.30) a.  

Mì tá tjá deési gó á dí wómì. →  

Mì tá tjá dēésí gó á dí wómì.  

1S IMF carry medicine go LOC DEF man  

“I am taking medicine for the man.” (Voorhoeve 1961:151)  

b.  

Dè féni lógósò butá à télà. →  

Dè féni lógósò bútá à télà.  

3P find turtle put LOC shore  

“The found the turtle and put it at the shore.”  

However, despite some cases of plateauing in serial verb constructions which are consistent with patterns found elsewhere in the prosodic system, there are some aspects of tone in these constructions which are somewhat unexpected and are difficult to describe in any consistent way. Various work (Rountree 1972a; Good 2003, 2004; Kramer 2004) has discussed the relevant issues, in some cases in a fair degree of detail, and here we summarize the relevant problems with-
out offering a specific new analysis. Rountree (1972a:325) was the first to discuss a key kind of
data, given in (2.31), using her tonal transcription. (We have had trouble re-eliciting (2.31b) due
to the lack of coherence of the coded events. Therefore, it has been difficult to verify the relevant
tones.)

(2.31) a. \(Mì\ wáṣí\ koósù\ butá\ à\ dí\ sónu.\ →\)
\(Mì\ wáṣí\ kòósù\ bútá\ à\ dí\ sónù.\)
1S wash clothes put LOC DEF sun

“I wash clothes and put them in the sun.”

b. \(Mì\ ó\ náki\ dí\ lógòsò\ kulé\ gó\ à\ mì\ wósù.\ →\)
\(Mì\ ó\ nákí\ dí\ lógòsò\ kúlé\ gó\ à\ mì\ wósù.\)
1S FUT hit DEF turtle run go LOC 1S.T house

“I am going to hit the turtle and run to my house.”

Setting aside complications of tonal transcription in sentences containing serial verb con-
structions, which we will come back to shortly below, what Rountree (1972a) takes as notable
about these sentences is the apparent high tones at the right edges of non-final verbs in the serial
verb construction and the left-edges of non-initial verbs (e.g., the final high tone on \(wáṣí\ ‘wash’
in (2.31a) and the initial high tone on \(kulé\ ‘run’ in (2.31b)). An important aspect of (2.31b) is the
interposition of a word with TBU’s specified for low tone between the two verbs in order to de-
terminate whether or not a plateauing analysis could account for the appearance of certain high
tones, which in the case of \(kulé\ in (2.31b) does not seem possible due its being immediately pro-
ceeding by the word \(lógòsò\ ‘turtle’, which only contains low tones.
Rountree (1972a) treats the appearance of high tones like these in serial verb phrases as instance of a kind of non-local plateauing, where two verbs are interacting with each other as though the intervening object were phonologically “invisible”. Good (2003) provided apparent counterevidence to these examples using minimal pair sentences like those in (2.32a) (see Good 2003:107), making use of verbs specified with low tones to test Rountree’s analysis.

(2.32) a. Ê na ki di tada. → Ê na ki di tada.
3S hit DEF rope
“He hit the rope.”

b. Ê na ki di tada bo. → Ê na ki di tada bo.
3S hit DEF rope loosen
“He hit the rope loose.”

The transcriptions in (2.32) indicate a difference in the final tone of na ki ‘hit’ in the two sentences, with sentence (2.32a) showing an expected low tone on the word (consistent with the pattern more generally exemplified in (2.23) where verbs and following objects do not form a plateauing environment). In (2.32b), however, there is an unexpected high tone when the verb is found within a serial verb construction. Notably, the second verb in the construction, bo ‘loosen’, contains only low tones, and thus should not be associated with plateauing on phonological grounds. Comparable instances of apparent “spurious” high tones are found in
(2.33)—these high tones are found both at the left edge of non-final verbs in serial verb constructions and the right edge of non-initial verbs.

(2.33)  
\( \text{a.} \) \( \text{À wáka bà wáta gó à wósu.} \rightarrow \) \( \text{À wáká bà wátà gó à wósù.} \)  
3S walk carry water go LOC house  
“He walked the water into the house.” (Good 2003:109)

\( \text{b.} \) \( \text{Kofi féni wáta bà à wósu bebé éside.} \rightarrow \) \( \text{Kòfí féni wátà bà à wósú bébé ésidè.} \)  
Kofi find water carry LOC house drink yesterday  
“She found water, carried it home, and drank it, yesterday.” (Good 2003:110)

\( \text{c.} \) \( \text{À féni wáta bà butá à wósu.} \rightarrow \) \( \text{À féni wátà bà bútà à wósu.} \)  
“He found water and carried it home.” (Good 2003:110)

In (2.33a), there is an unexpected high tone on the last TBU of \textit{wáka} ‘walk’. In (2.33b), there is an unexpected high tone on the last TBU of \textit{féni} ‘find’ and the first TBU of \textit{bebé} ‘drink’. In (2.33c), there is an unexpected high tone on the last TBU (again) of \textit{féni}. Notably, in (2.33c), the first TBU of \textit{butá} is low, as would normally be expected. Good (2003) takes examples like this to be indicative of the presence of tonal morphology on Saramaccan serial verbs which marks the right edge of a non-final verb and the left edge of a non-initial verb not immediately preceded by another verb.
Good (2004) and Kramer (2004) add to the dataset and show that the reality appears to be more complex than this, however, as indicated by the examples in (2.34). (Example (2.34a) repeats (2.30c).)

(2.34) a. \( \text{Dè féni lògòsò butá à téla. \rightarrow Dè féni lògòsò bútá à téla.} \)
\( 3P \text{ find turtle put LOC shore} \)
\( \text{“They found the turtle and put it at the shore.”} \) (Good 2004:612)

b. \( \text{Dè féni dí lògòsò butá à téla. \rightarrow Dè féni dí lògòsò bútá à téla.} \)
\( 3P \text{ find DEF turtle put LOC shore} \)
\( \text{“They found the turtle and put it at the shore.”} \) (Good 2004:612)

c. \( \text{Dè súti dí lánga sèmbè. \rightarrow Dè súti dí lángà sèmbè.} \)
\( 3P \text{ shoot DEF tall person} \)
\( \text{“They shot the tall person.”} \) (Good 2004:614)

d. \( \text{Dè súti dí lánga sèmbè kú. \rightarrow Dè súti dí lángà sèmbè kú.} \)
\( 3P \text{ shoot DEF tall person kill} \)
\( \text{“They shot the tall person dead.”} \) (Good 2004:614)

The sentence pair in (2.34a) and (2.34b) indicates that the presence/absence of a left-edge high tone on a non-final serial verb can be sensitive to the presence of a (high-tone) definite arti-
icle on the intervening noun phrase. The sentence pair in (2.34c) and (2.34d) suggests that serial verb high tones may appear on an adjective in an intervening noun phrase, not just a verb. Good (2004) takes these facts as indicative of tension between the intonational and the tonal aspects of Saramaccan prosody, specifically resulting from an attempt to impose a general LHL intonational contour across an entire sentence as a kind of “overlay” on top of the more local plateauing processes. Under such a view, while lexical low tone specifications cannot be overridden, nearby unspecified TBU’s may become “raised” unexpectedly as a result of the imposition of the LHL pattern.

The discussion to this point has glossed over a key issue that will be returned to in section 2.5: What does it mean to transcribe TBU’s as “high” or “low” in a language where lexical items can be drawn from an intonational or tonal lexical stratum? Indeed, informal instrumental investigation of the pitch of Saramaccan utterances has not revealed a system where TBU’s can be neatly segregated into high and low tones, most notably because the high “tones” in stressed syllables are often noticeably higher in pitch than high tones which result from plateauing. Furthermore, in many of the sentences just discussed, the spurious high tones are not particularly high. For example, while the transcription of the phrase ‘the tall man’ in (2.34d) as \textit{dí lángá sèmbè} does not seem unreasonable if one assumes only the possibility of a strict high/low contrast, instrumental data would actually suggest an alternative transcription along the lines of \textit{dí lángá sèmbè}, with mid tones on \textit{dí} and the second (unstressed) TBU \textit{lánga}. Furthermore, within the context of the serial verb construction, this phrase is notably shorter than in (2.34c), making tonal perception more difficult as well as compressing the pitch range by virtue of reducing the time between tonal transitions. Therefore, apparent spurious high tones in serial verb constructions, at least partly, may, in fact, be an artifact of an imposition of a binary high/low transcription model.
on a system where pitch can align somewhat more “elastically” with segmental material in the way usually associated with intonational languages. In the scope of the present description, it, therefore, seems best to simply say that serial verb constructions are a part of Saramaccan grammar where the “clash” between its intonational and tonal aspects is particularly pronounced, rendering their precise tonal analysis difficult.

2.4. Intonational processes

2.4.2. Overview

In addition the phrasal phonological processes discussed in section 2.3, there are also a number of significant utterance-level processes in Saramaccan. One of these, final lowering, was already introduced in section 2.3.1.8 and will be further discussed here. Another, is a special falling pattern found at the end of negative clauses. In addition, there are the issues of the overall pitch contour of utterances, including the role of pitch in signaling emphasis, and the formation of yes-no questions using intonational cues. Each of these will be discussed in turn below.

Our general impression of Saramaccan clausal intonation is that it is more reminiscent of what is found in English, for example, than of West and Central African languages. In particular, there is a flexibility in the deployment of pitch across utterances, for instance to mark emphasis (see section 2.4.4) that is typical of an accentual language like English, but not as readily exploitable in truly tonal languages, where the manipulation of pitch to express different degrees of pragmatic emphasis is typically more restricted. Also, while we have not examined the phenomenon in detail, it appears that clauses in the languages are subject to a tendency towards downdrift.
Rountree (1972a:309–314) discusses a number of intonational phenomena that are not specifically treated here, in large part because we encountered difficulties either in uncovering the same generalizations with our consultants or because the nature of her descriptions left us unsure as to how precisely to interpret her analysis, in particular regarding her sense of the word *stress*. So, while, overall, her descriptions can be said to be fairly accurate within the descriptive framework she adopted, we cannot verify all the details she discusses. Some of the examples below are borrowed from her work, though specific citations are not always given because our tonal transcriptions differ from hers.

The surface transcriptions given in this section differ from those in the previous section by virtue of transcribing intonational processes via tone marks rather than restricting the transcription to “pure” phrasal tonal patterns.

### 2.4.3. Utterance-final lowering

A general process in Saramaccan is utterance-final lowering in which the final non-low TBU of a clause is realized as lower than would be expected from its lexical form. (Final TBU’s which would be expected to surface as low simply remain low.) As noted by Rountree (1972a:317), the final-lowering process does not affect all high-tone TBU’s uniformly. Specifically, high-tone TBU’s which would normally be expected to enter into a plateauing relationship with the word appearing before them appear as low, while high-tone TBU’s which would not be expected to plateau with the word before them appear to be somewhat lower than might otherwise be expected, but are still clearly higher than a low-tone TBU preceding them. Rountree treats this as a “mid” tone, though this must be understood as a transcription indicating a relative pitch level rather than as an indication of a third distinctive tone level. Relevant examples are given in
(2.35). Examples (2.35a) and (2.35b) gives cases where a high is realized at a level that seems most readily interpreted as low, and examples (2.35c), (2.35d), and (2.35e) gives cases where the level is best described as between low and high (and hence, transcribed as mid).

(2.35) a. \( Mì \ bì \ paká \ mì \ wósù \ paimá. \) → \\
\( Mì \ bì \ páká \ mì \ wósù \ pàmà. \) \\
1S PST pay 1S.T house payment

“I paid my rent.”

b. \( Mì \ tá \ kulé. \) → \\
\( Mì \ tá \ kùlè. \)

“I am running.”

c. \( Mì \ tá \ kulé \ tidé. \) → \\
\( Mì \ tá \ kùlé \ tidè. \)

“I am running today.”

d. \( Dí \ lógósò \ kulé \ alá. \) → \\
\( Dí \ lógósò \ kùlé \ àlá. \)

DEF turtle run over.there

“The turtle runs over there.”

e. \( Mì \ ó \ bebé \ kofti. \) → \\
\( Mì \ ó \ bébé \ kòftí. \) \\
1S FUT drink coffee

“I am going to drink coffee.”

(Rountree 1972a:322)
It is difficult to understand the exact source of this differential lowering pattern. The most straightforward way to look at it is presumably to see it as resulting from a phrasal phonological effect specifying one primary accent per phonological phrase, where the phonological phrase is understood as a plateauing domain and the primary accent is found on the first high-toned TBU. Cases like (2.35a) and (2.35b) would then surface in the way seen due to the fact that the final high tones would not be primarily accented and, thus, shift to being completely unaccented, in pitch terms, when phrase final. By contrast, in (2.35c), (2.35d), (2.35e), the final words of these sentences stand in their own plateauing group and, therefore, have only one high-tone TBU available for primary accent. In final position, this high tone may be lowered but not completely effaced due its status as bearing primary phrasal accent. This is a somewhat speculative interpretation, but it may, nevertheless, help at least make the overall descriptive facts surrounding this pattern clearer.

In addition to final tone lowering, utterance-final position is also frequently associated with partial devoicing of final vowels, sometimes rendering certain phonetic contrasts (e.g., between the members of the pairs of mid vowels) more difficult to perceive than is otherwise the case.

2.4.4. Negative lowering

Rountree (1972a:310) reports that in negative sentences the final two syllables of the last word appear with low tones, in a pattern reminiscent of what is found in Central African languages showing VONeg structures (see Dryer 2009). This intonational complexity does not appear to have been seriously explored since Rountree (1972a) and, at least based on the speech of one consultant, we can refine the earlier description somewhat. The lowering of tones in negation is
not realized as simple low tones but, rather, a falling pattern across the penultimate syllables where the final word is two syllables and a fall in cases where the final word is one syllable.

Examples are given in (2.36) where positive and negative sentences are paired. A circumflex is used when the final fall seems primarily located on one TBU and this seems sufficient to describe the opposition between the positive and the negative, a mid followed by a low is used for those cases where it seems better to see the fall as spread across two TBU’s. The pitch transcription here is deliberately narrow, and we do not claim that our tone marks represent an ideal underlying analysis. While the negative marker is transcribed uniformly with a high tone in the examples, it has an alternate realization (of unknown conditioning) with a falling tone. In addition, in cases where the subject is pronominal in negative sentences, a coalescence effect occurs for some pronouns, and they are not realized with a distinct tone and the vowel is lowered, as indicated. In the elicited examples used to verify the tonal patterns of negative sentence, a distinct negative marker of form á was also regularly heard, though this marker can also be elided when it would appear after a modified pronoun. (See section 7.1 for more general discussion of negation.)
(2.36) a.  
Mì tá wáka. →
Mì tá wákà.
1S IMF walk
“I am walking.”

b.  
Mé á tá wáka. →
Mé á tá wákà.
1S.NEG NEG IMF walk
“I am not walking.”

c.  
Mì tá hákísi. →
Mì tá hákísì.
1S IMF ask
“I am asking.”

d.  
Mé á tá hákísi. →
Mé á tá hákísì.
1S.NEG NEG IMF ask
“I am not asking.”

e.  
Mì tá njá. →
Mì tá njá.
1S IMF eat
“I am eating.”
f. Mé á tá njá. →

Mé á tá njá.

1S.NEG NEG IMF eat

“I am not eating.”

g. Mì súti dí dágú kú. →

Mì sútí dí dágú kû.

1S shoot DEF dog kill

“I shot the dog dead.”

h. Mé á súti dí dágú kû. →

Mé á sútí dí dágú kû.

1S.NEG NEG shoot DEF dog kill

“I did not shoot the dog dead.”

i. Mì ké bái dí sútūu dí à bi sindó nēē démù. →

Mì ké bái dí sútūú dí à bi sindó nēē démù.

1S want buy DEF chair REL 3S PST sit.down LOC.3S inside.

“I want to buy the chair that he was sitting on.”

j. Mé á ké bái dí sútūuú dí à bi sindó nēē démù. →

Mé á ké bái dí sútūúú dí à bi sindó nēē démù.

1S.NEG NEG want buy DEF chair REL 3S PST sit.down LOC.3S inside.

“I don’t want to buy the chair that he was sitting on.”

This final negative contour does seem to be best described as affecting the final word of a sentence since it has been found to affect words with a variety of syntactic roles and which are
unified only by their position in the utterance. This is most clearly seen by looking at sentence (2.36i) where the final word is within a distinct clause from the negation.

The transcriptions used above to indicate the nature of this contour do not encode some important nuances regarding its realization (see also section 2.5). For instance, in the pair in (2.36e) and (2.36f), there is a phonetic fall on the final syllable of the utterance in both cases, even though one is transcribed only in (2.36f). Perceptually, the fall in (2.36f) was somewhat longer, and more salient and, therefore, appeared more like a “true” fall than the one found in (2.36e) which, more likely, simply represented the necessary transition between the penultimate high tone and the final low tone.

2.4.5. Emphasis within a clause

As mentioned above, our impression overall is that Saramaccan clausal intonation is closer to that of, say, English than languages of West and Central Africa. Where this seems particularly clear is in the language’s use of pitch fluctuations where a higher pitch can be found on words that are “emphasized” in one way or another. For instance, in the pair in (2.37), two different words can be in focus (depending the associated pragmatic context), and this focus results in two significantly different pitch realizations. In (2.37a), where the first word alá ‘over there’ is in focus, its pitch is noticeably raised to the point where its initial low tone is around the same level as the high tone of the following word njānjá ‘food’. (This is indicated with a downstep marker in the surface transcription.) In (2.37b) by contrast, the tone patterns are more consistently realized across the utterance.
Comparable patterns are found in content questions. Specifically, the question word (and, possibly, an associated element modified by the word) can receive a higher pitch than found for other high tones in the utterance.

(2.38)  
\[ \text{U wómí tá wáka?} \rightarrow \text{U wómí 'tá wáka?} \]

which man IMF walk

“Which man is walking?”

While it seems clear that exaggerated pitch can be used to indicate emphasis, these patterns have not yet been studied in detail and would seem best subjected to instrumental, rather than purely impressionistic study, due to the difficulties in separating out the perception of lexical tone from clausal intonation.

An additional way of indicating emphasis (over a whole clause) involves the use of a clause-final particle ́é (see section 15.4.5). (This element is transcribed as ́ɛ in Rountree (1972a:312), perhaps because the contrast between ɛ and ́ɛ can be hard to discern sentence-finally where some reduction in voicing is often found.) Like yes/no question markers (see section 2.4.5), this parti-
cle is not subject to the utterance-final lowering rule and forms a plateauing environment with a preceding element.

\[(2.39) \quad \text{Mí tá wáka é!} \rightarrow \text{Mí tá wáká é!} \]

1S IMF walk INJ

“I am walking!”

2.4.6. Yes/No Questions

The intonation patterns of yes/no questions (see section 11.1) involves a higher pitch at the end of an utterance by virtue of a final high tone question marker, which the utterance-final lowering rule (see section 2.4.2) also fails to apply to. Less commonly, a yes/no question can be marked purely intonationally, in which case it, again, ends in a high tone either by virtue of utterance-final lowering not applying to a final high-tone TBU or by the raising of a final unspecified syllable. In affirmative questions, a final question marker plateaus with the word preceding it. In negative questions, the negative falling contour (see section 2.4.3) targets the word before the question particle, plateauing is not found, and the particle surfaces with the same kind of “mid” pitch discussed in section 2.4.2 as appearing in certain final-lowering contexts.

\[(2.39) \quad \text{a. Mítá wáká nó?} \rightarrow \text{Mítá wáká nó?} \]

1S IMF walk INT

“Am I walking?”
b. À sīndō? → À sīndō?
3S sit.down
“Is he sitting down?”
c. Mì tá wāka? → Mì tá wâká?
1S IMF walk
“Am I walking?”
d. Á tá wāka nó? → Á tá wâkâ nó?
3S.NEG IMF walk INT
“Isn’t he walking?”

2.5. Notes on tonal and intonational phonetics and problems of analysis

As already indicated above, the split nature of the Saramaccan lexicon, into accentual and tonal strata, raises analytical difficulties, in particular in the realm of phrasal phonology. Beginning with Voorhoeve (1961), there has been a descriptive tradition in the language, continued here, of describing phrasal patterns in terms of sequences of high and low tones, as one might expect in a regular tone language. At the same time, there are cases in the grammar when it is not clear if the pitch patterns should be described via individual pitches on TBU’s as opposed to larger intonational “arcs”. This tension comes through most clear in serial verb phrases, but is also an issue in understanding patterns of marking emphasis which exploit pitch. It should further be noted that, while the transcriptions above with high and low tones, we believe, are a reasonable expression of the nature of the phonological oppositions in the systems, it can not always be assumed that they offer a clear transcription of how a given utterance is actually rendered by speakers. In par-
ticular, there appears to be a system of phrase-level accentuation which results in an accented high tone appearing with a higher high tone than other adjacent high tones.

For instance, in the citation form of a basic affirmative clause, like *Mì tá wáka* ‘I am walking’, instrumental evidence indicates that the “high” tone in *tá* can actually appear at more or less the level as the “low” tone in *mì*. Nevertheless, the indication of a high tone on *tá* seems justified on the basis of plateauing effects and the fact that, in other contexts (e.g., interrogative sentences) it can surface with an unambiguous high tone. While our assumption here is that such alternations are connected to patterns of phrasal accent, as just mentioned, we should emphasize that this is somewhat speculative. Ultimately, these issues are directly connected to the fact that the descriptive devices of prosody tend to be geared towards systems which are either primarily tonal or accentual in their deployment of pitch. To the extent that Saramaccan mixes the two, these descriptive devices are not fully adequate for understanding the system as a whole, though we hope to have conveyed its overall contours here, in addition to covering the most important subgeneralizations which govern it.
References


