The Phonology of Kisi Ideophones

George Tucker Childs
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The Phonology of Kisi Ideophones

G. TUCKER CHILDS

1. INTRODUCTION

The category of words which I consider in this paper performs a function often neglected in linguistic analyses, namely, the expressive function: the expression of one’s own personal feelings towards the message or one’s interlocutors (Mühlhäusler 1986:81). Besides expressing the personal feelings or attitudes of the speaker, ideophones serve the poetic function as well. They add an extra dimension of artistry or play. Expressiveness typically occurs only in special types of discourse, such as in Nootka songs, and possesses a systematicity of its own (Sapir 1915 [1949:188]). Because of the special pragmatics of expressive language, it has often been neglected in more restricted analyses.

This discussion looks at the sound system formed by the words performing an expressive function in Kisi, a West Atlantic language belonging to the Niger-Congo family spoken primarily in the Republic of Guinea. This system is then contrasted with the phonology of the rest of the language, and finally the implications of the differences are discussed.

A comparable study is Kaufman’s examination of Huastec (1986), a Mayan language spoken in East Central Mexico. His findings parallel mine in that he finds clear differences between words involved in sound symbolism and the rest of the language. Some phonemes are found only in the sound symbolic portion of the lexicon, and there are clear phonotactic differences as well. Adopting a diachronic perspective, he finds that this part of the lexicon has resisted regular sound change. A limitation of his study has to do with the nature of sound symbolism in Huastec; most of the sound symbolic words are onomatopoeic, a characterization not true of the ideophonic systems of African languages. Another comparable study is Fivaz’s (1963) analysis of Zulu ideophones, which form a large word class (2,600 words in his discussion). His purely structural approach presents detailed distributions and frequencies but fails to discuss the implications of his findings.

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1.1. What is an ideophone?

One of the earliest definitions is that given by Doke (1935:118):

A vivid representation of an idea in sound. A word, often onomatopoietic, which describes a predicate, qualificative or adverb in respect to manner, colour, sound, smell, action, state, or intensity. The ideophone is in Bantu a special part of speech, resembling to a certain extent in function the adverb.

Doke further notes the special distribution of ideophones as well as their unusual phonological properties. In another entry in his dictionary ("Reduplication"), Doke notes that the reduplication of ideophones is common (1935:185). It is this combination of phonological, semantic, and perhaps morphological criteria that has guided later investigators.

Although it is sometimes difficult to draw a clear line between the expressive and non-expressive parts of language, (see Carr 1966:371, 376), ideophones form a distinct word class in many African languages, that is, a category which can be differentiated on the basis of semantic, phonological, and (morpho-)syntactic grounds (cf. Samarin 1971).

Though occasionally involving onomatopoeia, most ideophones do not simulate the sound they represent. The iconicity present in ideophones is variable and forms part of a continuum of arbitrariness on which non-ideophonic language can also be located. At one end of this continuum is a totally arbitrary relation between sound and meaning, maintenance of the "double articulation", where sounds combine together meaninglessly to convey meaning. Most of what linguists consider language belongs to this end of the continuum. At the other end the relation between sound and meaning is direct. Sound symbolism and onomatopoeia are representative members of this end of the continuum.

Midway along this continuum are processes described by Woodbury 1987. One example is 'rhetorical lengthening' in English (e.g., You're cra-a-a-azy! [Woodbury's example]); a second is "Foot Stretching" in Central Yupik Eskimo, which lengthens and raises the pitch of the first foot of an intonational phrase in order to "intensify the degree to which content of the word it affects is intended, and marks it as 'new' or 'comment' in the discourse" (Woodbury 1987:715). In the case of both of these processes there is an iconic relation (and a gradient one) between sound and meaning.

As does language in general, ideophones span this continuum. They do, perhaps, have a much greater representation on the non-arbitrary end of the continuum while language in general has a greater representation at the other end. The point, of course, is that the difference between the
two is quantitative rather than qualitative, and thus ideophones should not be excluded from any discussion of language.

Ideophones represent a robust word category in African languages. Samarin, for example, reports that in Gbeya (Adamawa Eastern, Central African Republic) there are over 5,000 ideophones (1970:155). Maduka (1982) has claimed that in Igbo ideophones comprise an open and productive class. This category is not unique to African languages for such words form a similar class in other languages as well, e.g., Korean (Kim 1977), Mayan languages (Durbin 1973).

Although ideophones form an important class in many African languages, they are often ignored by researchers.1 Another indication of their neglect is the short shrift ideophones are given in standard dictionaries. For example, the standard Swahili-English dictionary (Johnson 1939) does not have a category for ideophones and only a few are listed in the dictionary itself (therein called adverbs).

Zulu ideophones have been analyzed in greater detail than ideophones in other languages, e.g., by Doke (1931). His analysis consists of dividing ideophones (which he calls "radicals") into groups as to the number of syllables they contain and further as to tonal contour. Monosyllabic and disyllabic ideophones form the largest class, with disyllabic ideophones being readily convertible to verbs by several productive processes (1931:237f). Zulu ideophones also appear with nasalized vowels in a language with no other nasalized vowels (Van Rooyen et al. 1976:15). Furthermore, contrasts in voice onset time can disappear in isolated patches of the ideophonic subsystem. Similar types of phonological differences characterize Kisi ideophones.

Yoruba (Benue-Congo, Niger Congo; Nigeria) ideophones have also been scrutinized. Yoruba ideophones use tone patterns to directly convey meaning.

(1)  
bíírí  'of gathering together swiftly'
bíírí  'of gathering together with moderate speed'
bíírí  'of a weighty object turning swiftly'
rógódó  'round, very small, very light'
rogo do  'average in roundness, size, weight'
rógódó  'of above average roundness, size, weight'

(Awoyale 1983/84:11)

Finally, reduplication can be used iconically; reduplicated forms convey intensity, plurality, and continuation.
1.2. What is an ideophone in Kisi?

The definition I have adopted is not one which can be stated in terms of necessary and sufficient conditions. Ideophones form a prototype category, with a core that links up with other parts of language along a number of different parameters, i.e., sharing some features with one word class, sharing other features with another. For example, links can be made with adverbs, verbs, exclamations, adjectives, and even nouns. There are even links that can be established with non-language, i.e. with gestures. For example, the ideophone fifi ‘stinky, smelly’ is used when something gives off an offensive odor. Invariably its production is accompanied by a crinkling of the nose in a concomitant indication of displeasure.

Ideophones are limited to certain types of discourse. Typically they are found in descriptions, narratives, and the like. They are not used equally by all speakers; they are rather a marker of a psychological state or the individuality of a speaker. Except from an aesthetic point of view, they cannot be considered to be “essential” to any discourse, i.e., from an information theory perspective.

Related to these facts is the fact that Kisi ideophones are limited, for the most part, to certain kinds of sentences. They are found primarily in declarative sentences and rarely appear in questions, negations, and focus constructions.

Ideophones are furthermore limited in that they can occur only with certain verbs, i.e., there are severe selectional restrictions on their dis-
I. Identification and Analysis of the Vivid Language

In the examples below, the first ideophone occurs with only one verb *tuλko* 'be warm' (and not, for example, with a verb such as *łumuco* 'to burn'), the second with just two verbs, and the third with three.

<table>
<thead>
<tr>
<th>Ideophone</th>
<th>Verb(s) with which it co-occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>cam-cam</td>
<td><em>tulko</em> 'to be warm or hot'</td>
</tr>
<tr>
<td>ca</td>
<td><em>pelyo</em> 'to be full'</td>
</tr>
<tr>
<td>cing</td>
<td><em>nuaa</em> 'to stare at'</td>
</tr>
<tr>
<td></td>
<td><em>tofaa</em> 'to look at'</td>
</tr>
<tr>
<td></td>
<td><em>coo</em> 'to see'</td>
</tr>
</tbody>
</table>

There is also the ideophone *fasaka-fasaka* 'rudely, roughly, in a rough manner', which can occur with verbs meaning 'bathe', 'go', 'eat', 'talk', 'walk', but not with 'run'. There seem to be no absolute restrictions on the number of verbs an ideophone is found with.

Ideophones typically occur clause or sentence finally. Often they are set off by a pause, as if the speaker were gathering strength for the unusual (and physically demanding) phonological features of ideophones. The fact that they appear finally has implications for links with verbs; verbs can also appear finally. When in compound (verb) constructions, i.e., with a preceding auxiliary, the verb comes after all non-subject arguments, at the end of the clause.

Kisi ideophones admit to no inflection except reduplication, as shown below. The partial reduplication illustrated in the first example can be extended indefinitely. A dramatic example of complete reduplication was in a narrative by a native speaker considered to be one of the better storytellers in the area. He used the second ideophone below five times in succession (repeating *donggu* five times).

<table>
<thead>
<tr>
<th></th>
<th>Verb(s) with which it co-occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>bili-li</em></td>
<td>'heavily flowing'</td>
</tr>
<tr>
<td><em>donggu-donggu</em></td>
<td>'going on and on'</td>
</tr>
</tbody>
</table>

On the semantic dimension, ideophones in Kisi perform something of an additive function. They intensify, augment, or more sharply delineate the semantics of the verb with which they appear. Often the only gloss that can be given for an ideophone (usually those with narrow selectional restrictions) is 'really Verb'. At other times ideophones pick out an image or sensation inherent in the action of the verb, something that acts on the senses of an observer such as a sound or sight. They are concrete rather than abstract in meaning in that they are tied to a particular situation or action.
As to phonology, ideophones exhibit phonological patterns different from those found in the rest of the language to which they belong. For example, there can be more phonemes in some areas, say, short vowels, and fewer in others, say, in the series of voiceless stops. Languages typically exploit sounds not part of the regular phonemic inventory for expressive purposes (see Sapir 1927).

To repeat, it is unlikely that an ideophone possesses all of the characteristics enumerated above. It would be sufficient for a word to possess only a subset of these features and still qualify as an ideophone. Ideophones form a prototype category with less good members at the periphery showing links with other word categories.

2. THE (CORE) PHONOLOGY OF KISI

Kisi has the following phonemes. Sequences in parentheses are of severely restricted distribution.

(5) Segment inventory of Kisi:

Vowels: \( i \ e \ \varepsilon \ a \ \circ \ o \ u \)

Consonants:

<table>
<thead>
<tr>
<th></th>
<th>Lab</th>
<th>Alv</th>
<th>Pal</th>
<th>Vel</th>
<th>Lab-Vel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasals</td>
<td>( m )</td>
<td>( n )</td>
<td>( n y )</td>
<td>( n g )</td>
<td>( n g m )</td>
</tr>
<tr>
<td>Nasal-cpd-stops</td>
<td>( m b )</td>
<td>( n d )</td>
<td>( (n y j) )</td>
<td>( n g g )</td>
<td>( n g m g b )</td>
</tr>
<tr>
<td>Implosives</td>
<td>( b )</td>
<td>( d )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V'less stops</td>
<td>( p )</td>
<td>( t )</td>
<td>( c^3 )</td>
<td>( k )</td>
<td>( k p )</td>
</tr>
<tr>
<td>Fricatives</td>
<td>( f )</td>
<td>( s )</td>
<td></td>
<td></td>
<td>( h )</td>
</tr>
<tr>
<td>Liquids &amp; glides</td>
<td></td>
<td>( l )</td>
<td>( y )</td>
<td></td>
<td>( w )</td>
</tr>
</tbody>
</table>

Besides single and double vowels, Kisi also has geminate consonants in a few morphological environments, namely \( l l \) and \( t t \). The phoneme \( n y j \) appears in only a few words.

Canonical syllable structure is a consonant followed optionally by a glide and a one- or two-voweled nucleus with a nasal or liquid optionally closing the syllable.

(6) Kisi syllable structure:

\[
C \quad (G) \quad V \quad (V) \quad \left[ \begin{array}{l}
N \\
L
\end{array} \right]
\]
There are four basic tones in Kisi, with an extra-high tone of limited distribution. There are two level tones: a High tone and a Low tone; and two contour tones: a Rising tone, and a Falling tone. The Extra-High tone (marked with a double acute accent) is found only in the verbal morphology. Tone is both grammatical (verbs, syntactic constructions) and lexical (all other word classes).

Contour tones are also limited in distribution, but not so severely as the Extra-High tone. Some of the contour tones can be seen transparently as deriving from sequences of unlike tones, as the example for 'nose' shows below.

(7) \[ \textit{milindo} \Rightarrow \textit{milindo} \Rightarrow \textit{mindo} \]

Similar processes can be seen in the verbal morphology where the melody for Past is LH: In a two-vowel (one or two syllables) stem, each tone can be attached to a vowel but when there is only one vowel, both tones must be associated with a single vowel, producing a rising tone.

(8) \[ \textit{ò lòl} \quad \text{it be-bitter} \]
\[ \textit{ò lòli} \quad \text{he be-bitter-CAUS it} \]
\[ \text{‘It’s bitter.’} \]
\[ \text{‘He made it bitter.’} \]

It seems possible, then, to interpret rising and falling tones as sequences of level tones.

Several intonational contours have been identified. Simple statements have a gradual fall over the course of the sentence with a terminal fall on the final syllable. Two question contours exist, one used with WH-questions and the other with Yes/No-questions; these question contours will not be relevant to the discussion that follows.

Besides these sentential processes, there is also the general process of downdrift (first noted for Kisi by Welmers 1976), which causes sequences of like tones to become sequentially lower. This means that a high tone at the beginning of a phonological sentence will be considerably higher than a high tone at the end of the sentence. High tones in between fall in a regular progression (see Childs In press for measurements of this drop). There are also a number of productive phonological rules, most of which can be interpreted as assimilatory or preserving syllable structure.

3. THE PHONOLOGY OF KISI IDEOPHONES

The data base on which this analysis was performed consists of roughly 300 ideophones elicited from ten different native speakers, all but one
of whom speak the southern dialect of Kisi. In the Appendix appears a representative sampling from that corpus.

3.1. **Phonemic inventory**

The differences between the phonemic inventories are not great. One significant difference is that there is an initial voiced labial-velar gb stop in Kisi ideophones, a segment that appears only allophonically elsewhere.

(9) The initial voiced labial-velar stop

\[ gbólúng-gbólúng \quad \text{‘ringing, switching’} \]
\[ gbú-ü-ü \quad \text{‘rumbling’} \]

As may be inferred from the examples above, gb (in initial position) is used only with ideophones representing sound. Its distribution is further limited in that it is followed only by back rounded vowels.

Another example of an unexpected sound is the nasalized vowel in the ideophone hā-ā-ā... ‘continuing on for some time’. Pronounced with a raised register, it is lengthened considerably longer than other Kisi syllables. Furthermore, the vowel is nasalized as it is in no other Kisi word in this environment. There are nasalized vowels appearing after nasal segments, as in the second and third examples, but never after h\(^4\), as shown by the fourth example.

(10) Ideophone: \[ hā-ā-ā... \quad \text{‘going on for a long time’} \]
Non-Ideophones: \[ māmāng \quad \text{‘two’} \]
\[ nyāāō \quad \text{‘thing’} \]
\[ háā \quad \text{‘those (a class)’} \]

Although vowels are regularly nasalized after nasal consonants, nasalization does not regularly occur after h except in the ideophone above.

Another unusual feature of Kisi ideophones is that they can end in voiceless vowels. This feature usually arises when the ideophone has some onomatopoeic or iconic relation to the phenomenon it represents, as in the first example below. The vowel is drawn out in the same way the sound or action it represents; whether the voicelessness is phonological or simply a result of there being insufficient air flow to maintain voicing is unclear.

(11) \[ wā-ā-ā-ā \quad \text{‘hissing’} \]
\[ piā-ā-ā \quad \text{‘cutting sharply’} \]
At the end of both these examples the final vowel is voiceless. In the first example the vowel begins as breathy voiced and fades into voicelessness, imitating not only the prolonged nature of the sound but perhaps also its sibilancy.

A final difference between the two sets of inventories is the presence of a schwa in the ideophonic set. The schwa appears in at least one ideophone: fósóká-fósóká ‘rough, sloppily, hurriedly, disjointedly’. The vowels in this ideophone are of extremely short duration.

3.2. Syllable structure and phonotactics

Syllable structure for Kisi ideophones is only slightly different than elsewhere in the language.

(12) The syllable structure of Kisi ideophones:

\[
C \ (G) \ (V \ldots) \ (ng)
\]

As can be seen, it is usually only the velar nasal that is allowed to close syllables. Elsewhere the other nasals and the liquid can close syllables. The first consonant in Kisi ideophones is most often a voiceless obstruent.

In ideophones of more than one syllable, the phonotactics are even more constrained. In ideophones of two or more syllables, the vowels are usually identical. The vowels in polysyllabic ideophones are most often the same throughout the ideophone, as in the examples below.

(13) \textit{tënggëng-(tënggëng)} ‘erect, as when a cobra rises’

\textit{bìlì-li (-li \ldots)} ‘heavily flowing’

Furthermore, the consonant between the identical vowels in most cases will be the alveolar liquid /a/, as in the second example. There are no constraints on medial consonants elsewhere in the language, although it is generally true that nasal compound stops are found medially and other stops initially.

Sequences which occur in Kisi ideophones are occasionally not found elsewhere; examples are ngc and vw\textsuperscript{6}, and the sequence ngng illustrated below.

(14) \textit{cònggàngcò́dò} ‘hopping’

\textit{vwùm-vwùm} ‘regularly beating’

\textit{ngúéngngúé} ‘tightly, completely’

Nowhere else do these sequences occur.
Other phonotactic differences, which have not yet been discussed, are given below.

1. **Glides**: The palatal glide \( y \) generally occurs before front vowels (versus the distribution in the rest of the language). (The palatal nasal \( ny \) occurs *only* before front vowels.) The labial-velar glide \( w \) occurs commonly before back vowels (see distribution of labial-velar stops below). Both glides are rare intervocically.

2. **Nasals**: Nasals rarely occur intervocically, unlike in the rest of the language. The velar nasal, as mentioned above, is the only nasal allowed to close syllables. Nasal compound stops are rare in ideophones.

3. **Stops**: The voiceless velar stop \( k \) is almost the only stop to appear intervocically and between like vowels. Voiced stops (implosives) are found predominantly initially; if they are found intervocically, they are found between like vowels. The labial velar stops are much more common with ideophones than elsewhere.

4. **Fricatives**: Fricatives are found both initially and intervocically, in the latter position more commonly than in the rest of the language.

5. **Liquid**: The lateral liquid \( l \) is found initially and intervocically, especially between like vowels. Half of the time a consonant appears between vowels, it will be the lateral liquid.

6. **Vowels**: Vowels never begin ideophones. The mid vowels, \( o \ o \ e \ e \), are considerably less common than the peripheral vowels, \( i \ a \ u \). There are no length contrasts, although expressive lengthening and shortening does occur.

### 3.3. Neutralizations

In the non-ideophonic part of the language, there are few neutralizations, the only remarkable one being the lack of contrast between the alveolar nasal \( n \) and the velar nasal \( ng \) in a limited number of intervocalic environments.

Ideophones seem to have no contrast between an open syllable and one closed by the alveolar lateral \( l \).

(15)  
\[
\begin{align*}
pá/páł & \quad \text{‘dripping’} \\
fü-fül/füľ-fül & \quad \text{‘rushing (of air)’}
\end{align*}
\]

The same could be said of the much more common syllable-closing velar nasal, i.e., that there is free variation at the end of ideophones.

(16)  
\[
yénggé-yéngge / yénggéng-yénggéng
\]
‘delicately balanced’
Furthermore, a syllable-final bilabial nasal m freely alternates with the velar nasal ng.

(17)  
cám-câm / cáng-càng

‘lukewarm’

Because of the potential for “expressive” lengthening that occurs with many ideophones, there are no contrasts in length among ideophones. In the non-ideophonic part of the language, there are clear contrasts between long and short vowels for all vowels. An example of length neutralization is the free variation in an ideophone between a long and short vowel.

(18)  
bông / bôông

‘sucked in’

When long vowels do occur, they are found only in the final or, occasionally, in the initial syllable.

Other length distinctions also do not occur: there are none of the regular geminates found in words from the rest of the language, i.e., ll and tt. Other pairs that represent potential consonantal neutralizations are the following.

(19)  
léu-léu / leému / léémù-léémù

‘flexible’
yángmgbàng / yàngmgbàng / wángmgbàng

‘wide open’
félé-félé / vélé-vélé

‘haltingly’
kócù / dócù

‘knocking’
káù / dáù

‘immediately, abruptly’

There are also sets of words, such as those below, where no easily describable neutralization is discernible.

(20)  
héléng

‘leaving a set position’
féngmgbéndéng

‘coming out of a socket’
féléméndéng

‘surprisingly, astoundingly’

Mid front and mid back vowels in ideophones often vary freely.

(21)  
féfélé / fófoló

‘light (in weight)’
kpénggéng-kpénggéng / kpónggóng-kgónggong

‘sound of a bell’
There are other suggestions of vowel neutralizations in the following examples.

(22)  
\[ \begin{align*} 
\text{pó / pó} & \quad \text{‘striking another object’} \\
\text{pálálá / pélélélé} & \quad \text{‘cleared up, transparent, settled’} \\
\text{wilé (-wilé)} & \quad \text{‘cold (with reference to water)’} \\
\text{wilt-wilt} & \quad \text{‘extremely cold’} 
\end{align*} \]

There are rule differences as well. Some phonological rules operant in the non-ideophonic part of the language do not hold with ideophones (cf. Mithun 1982). The voiceless labial-velar stop is regularly voiced intervocalically, but remains unvoiced in Kisi ideophones.

(23) Non-ideophonic:  
\[ \text{kpègbòò} \quad \text{‘cockroach’} \]

Ideophonic:  
\[ \begin{align*} 
\text{billó cô hülêmndó yíkpé-yíkpé} & \quad \text{‘The grass is shaking intensely.’} \\
\text{kèlè kpàm-kpàm ndó hòò kò ní} & \quad \text{‘All this person does is stroll aimlessly.’} 
\end{align*} \]

Other assimilatory and simplification processes are not in effect with Kisi ideophones. For example, the intervocalic nasal sequence in the ideophone \text{ngúèngngué} ‘tightly, completely’, would be reduced to a single nasal in the non-ideophonic part of the language (\text{ngng} simplifies to \text{ng}). Because there is little morphology, there are few phonological rules of the morphophonemic variety. For example, no syllable-building rules of the type described in Childs 1985 are found in ideophones. Even the more “phonetic” rules, such as the labial-velar voicing and nasalization rules illustrated above, are not fully represented. Some rules of the latter type, however, are part of ideophone phonology. For example, a rule of perseveratory nasalization still holds. In the ideophone \text{nímí-nímí} ‘tasty’, all vowels are nasalized: \[ \text{[ní mí-ní mí]} \]. There are no rules unique to Kisi ideophones.

3.4. Tone

There are also peculiarities about the tonology of Kisi ideophones. As mentioned above, different word classes have different patterns of tone assignment. Verbs receive their tone in the grammar while nouns and other word classes receive their tones in the lexicon.

Kisi ideophones are exceptional in the way tone is assigned. It is assigned
lexically, as with nouns, but there is an unusual distribution of contour tones. Contour tones are not restricted to the rightmost syllable as they are elsewhere in the language. Contour tones are also found on initial (leftmost) syllables.

(24)  

<table>
<thead>
<tr>
<th>Kisi</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>kpingmbi</td>
<td>'darkly, darksome'</td>
</tr>
<tr>
<td>dālī</td>
<td>'sticky'</td>
</tr>
<tr>
<td>lākpó-lākpó</td>
<td>'slurping (as licking)'</td>
</tr>
<tr>
<td>kāyiāng-kāyiāng</td>
<td>'wobblingly, drunkenly'</td>
</tr>
<tr>
<td>yēngmgbēng-yēngmgbēng</td>
<td>'delicately balanced'</td>
</tr>
</tbody>
</table>

A second contrastive fact about the tonology of Kisi ideophones is that, in general, there are many more High than Low tones on Kisi ideophones. This is the opposite pattern for the rest of the language. The High tone can be considered “marked” (in the sense of Maddieson 1978). Such is not the case in the ideophonic sub-section of the language.

A final difference is that there are many more Extra-High tones on ideophones than elsewhere. In fact, many of the tones that I have marked High are actually Extra-High, that is, they share the phonetic correlates of the Extra-High tone found only in the verbal morphology of Kisi. But the fact is that Kisi ideophones frequently feature an exaggerated pitch register when compared to the rest of the language. That is, all High tones are higher, i.e., it is not clear there is a contrast between a High and Extra-High tone within the ideophonic sub-system.

(25)  

<table>
<thead>
<tr>
<th>Kisi</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>kāfu</td>
<td>'grabbing, grasping'</td>
</tr>
<tr>
<td>kpāng</td>
<td>'tightly, intently, carefully'</td>
</tr>
<tr>
<td>kōlū-kōlūō</td>
<td>'scratching'</td>
</tr>
</tbody>
</table>

As can be seen, the Extra-High tones are found over the entire word, rather than over a single vowel as is the case elsewhere. Nonetheless, the contrast with the High used in the rest of the language is clear when ideophones appear in complete sentences.

(26)  

<table>
<thead>
<tr>
<th>Kisi</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>kō sānāā</td>
<td>'Go straight ahead!'</td>
</tr>
<tr>
<td>mbō kwā á</td>
<td>'He took absolutely everything with him.'</td>
</tr>
</tbody>
</table>
In the first example, the High of the imperative is higher than a normal High, yet it is still not so high as the tones on the ideophone.

3.5. Other unusual phonological features

Besides the expanded pitch range mentioned above, Kisi ideophones exploit other resources of the vocal tract not used elsewhere in the language. These are summarized below.

1. Expanded pitch range
2. Rapid modulation or exaggerated range of register
3. Phonation: breathy voice, creaky voice, voicelessness, and whisper
4. Duration: unusually short or long
5. Rate: faster or slower than normal

It is these features that often are subsumed in the general category of “expressive intonation”. By “expanded pitch range” is meant that the High tones are higher in pitch and the Low tones are lower, that is, if indeed the High-Low distinction can meaningfully be transferred to this part of the language. This phenomenon has been illustrated with regard to the upper end of the range above. With regard to the lower end of the expanded pitch range, voicing often changes from regular phonation to creaky voice. This occurs, much as might be expected, when the ideophone is prolonged excessively and lowered in pitch. Another concomitant feature to prolongation is the devoicing of the final vowel, as in the second example below.

(27)  kéùwó tènù mèngndàng pìà-à-à ...  (Final vowel devoiced)
     snake cut water IDPH
     ‘The snake cut sharply through the water.’

     dò kwè dè-è-è ...  (Final vowel creaky, then devoiced)
     PRO go IDPH
     ‘She went slowly.’

Breathy voice is illustrated in the examples below.

(28)  héù-héù
     ‘panting’ (rapid breathy voice with low pitch)

     wà-à-a
     ‘hissing’ (said with breathy voicing, fading to voicelessness on a falling pitch)

     pûkéê
     ‘whooshing (sound of rice as it falls into fanner)’
     (said with a breathy voice, vowel becoming devoiced at end)
Another feature of Kisi ideophones is the rapid change in pitch. In the example below, the fall from high to low is much further than that of the falling tone found in the rest of the language.

(29) ĭông-ųông ‘throbblingly’
įm ‘thunking’

Examples of prolongation have been given above. Examples of extremely rapid speech are given below.

(30) kòdông mà fūlú būlī-lī-lī ...

blood PRO leave IDPH
‘The blood gushed out.’

į kó pūlvngndó fūsökɔ-fūsökɔ

PRO go wash-self IDPH
‘Let me go bathe in a rough manner.’

In both these cases there is an element of iconicity, the blood rushing out rapidly in the first case, and the bathing being done in a hurried manner. The same sort of iconicity can be seen in the example below, illustrating a slower paced utterance.

(31) mį kòlló fūlɔ yá vůım vůım

CONJ heart come-out me IDPH IDPH
‘My heart is beating loudly and steadily.’

In fact, the rate of repetition imitates that of a regular heart beat.

3.6. Summary

It is clear that Kisi ideophones possess a distinct and separate phonology. There are differences in all areas. There is a different inventory of segments; some segments are only found in ideophones, while others occur in the rest of the language but never in ideophones. There are neutralizations and contrasting phonotactics. In the suprasegmental part of the language the differences are most apparent. The tonology is simpler, but the overall suprasegmental pattern is more complex in that more resources are exploited. The main difference between the two phonologies is in terms of where the greatest number of contrasts occur. There are fewer units and contrasts in the segmental portion of the ideophonic subsystem, but more possibilities on the suprasegmental level. Furthermore, the resources exploited on the suprasegmental level are less of a binary and more of
a scalar nature. In addition, the notion of phonological rules is almost irrelevant for ideophones.

4. IMPLICATIONS AND DISCUSSION

The question is not whether or not expressive language should be considered as part of language, but rather how it should be integrated into an adequate description. Woodbury (1987) has shown how an expressive rule forms part of an ordered set of phonological rules: a rule of expressive lengthening belongs within the post-lexical phonology. He finds “expressive” rules to be part of language proper. Nonetheless, in order to retain its expressiveness, expressive language remains on the fringe of language proper (Ultan 1978:551).

If we accept the conclusion that ideophones must be included in our description, how can we characterize their relation with non-ideophonic language? Are ideophones generated from within the language or from without? Despite their wild phonology a number of ideophones are clearly related to other words in the language. In comparing the phonology of ideophones with that of the rest of the language, we delineated clear differences and similarities. The question now is whether any directionality can be deduced from this comparison. In short, can we identify a source for (new) ideophones? The investigation of this question will take us beyond consideration of the phonological relation to consider other links, both with the matrix language and with universals.

4.1. Derivational relations

Ideophones clearly depend on the phonology of the language in which they occur. At the least, in that their (formal) composition must be different from other words in the language, they are constrained by what they cannot be. As noted earlier, analysts of ideophones in Southern Bantu languages have noted the close relation between ideophones and verbs. Such relations also exist in Kisi and suggest the importance of the reference language. The first word in each pair below is an ideophone and the second a verb.

(32)  
1. láási-láási  
2. láásidá  
3. móósú  
4. móósáá  
5. búúú  
6. búúwáá

‘thoroughly mixed up, confused’
‘to play tricks’
‘(folded up) tightly’
‘to fold or embrace’
‘peeling bounteously’
‘to peel’
The phonology of the ideophonic sub-system is never completely arbitrary but must bear some relation with its matrix language. In the examples above we see decided tonal and some segmental differences between ideophones and related words yet none so wildly aberrant they would be considered impossible to Kisi speakers.

It is also true that ideophones in Kisi are related to word classes other than verbs. In the examples below, the first word in each pair is an ideophone and the second a noun.

(33)  

<table>
<thead>
<tr>
<th>Word 1</th>
<th>Word 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>müi</td>
<td>'hard, sharp, bitingly'</td>
</tr>
<tr>
<td>müiyó</td>
<td>'mosquito'</td>
</tr>
<tr>
<td>kpélé-kpélé</td>
<td>'straight (up), steeply'</td>
</tr>
<tr>
<td>kpélá</td>
<td>'tall, straight palm tree'</td>
</tr>
<tr>
<td>ländō</td>
<td>'flacid, floppy'</td>
</tr>
<tr>
<td>ländōngndō</td>
<td>'trousers'²²</td>
</tr>
<tr>
<td>bōng / bōng</td>
<td>sucked or drawn in'</td>
</tr>
<tr>
<td>bōmbōngndō</td>
<td>'candy (because cheeks drawn in when sucking on it)'</td>
</tr>
</tbody>
</table>

The last two examples are instructive as to the directionality of derivation. The words for 'candy' and 'trousers' are likely derived from the ideophones for these are non-native concepts introduced relatively recently. It is unlikely that the creation of the ideophones postdated the introduction of trousers and candy into the culture.

That derivations go the other way is also possible, as seems to be the case in many Bantu languages. Doke sees the derivational relation between ideophones as bidirectional (Doke 1931:224). In Yoruba, however, Awoyale (1981:146) claims that derivation takes place in only one direction, from ideophone to another word category:

The pattern of derivation is from predicative ideophones to ideophonic nominals/nouns to full nouns, rather than the other way round, is borne out by two facts: (i) wherever an ideophone has two senses, predicative and nominal, the former is usually literal while the other is idiomatic, and (ii) it is usually the predicative ideophone that can be reduplicated and also serve as the stem for a prefixation to create a new nominal while the ideophonic noun derivations ... are totally barred.

Bidirectionality in Kisi seems possible in that ideophones and verbs fill similar syntactic slots.

The close relation between verbs and ideophones in Kisi can be seen in their parallel syntax after co, the copula and present auxiliary.
In the first two sentences the word of interest is an ideophone. In the third sentence it fills the slot of a non-finite verb or adjective (adverbs are also allowed here). Because this relation is not widespread enough and the directionality is unclear, it is unwarranted to claim that ideophones are actually a sub-category of verbs. In these constructions, it is ambiguous whether ideophones are still ideophones since in other constructions some can also function as verbs, showing inflections of aspect and tense.

Another parallel syntactic construction is a verb-verb construction, where the first verb is somewhat bleached of meaning and appears to be an incipient auxiliary. The slot is filled with, e.g., verbs such as huno ‘come’, loko ‘stay’. In such constructions the second “verb” is, what in other contexts, would be identified as an ideophone.

Identifying the relation of ideophones to the rest of language is somewhat complicated by regular language processes. Once an ideophone has entered the language, it is possible for accretion to occur. That is, related words will build up both semantic and phonological associations, such as those described by Bolinger (1949) and labelled “phonesthemes”. Such processes have been invoked by many analysts, e.g., Maduka (1982) for Igbo, and Marchand (1959) for English. These forces are especially important for ideophones and for expressive language in general. Evidence of these forces in Kisi is seen in the many “neutralizations” discussed above. Words which were once both formally and semantically distinct have undergone a shift or merger in meaning so that their forms are different and their meanings the same.

Once an ideophonic system is established it exerts pressures of its own on candidate ideophones. As discussed above, ideophones have a phonology of their own to which the best ideophones conform. Somewhat paradoxically, while ideophones establish their difference from other words of the language, they also must establish similarities. They still must be recognizable as possible words in the language as well as obey the constraints of the ideophonic sub-system.
4.2. Ideophones and universals

It is clear that ideophones owe at least some of their form and content to universals, although some investigators reject the possibility of universal phonetic symbolism in any but its weakest form, i.e., as a possible factor (see references in Durbin 1973:26-27). Phonetic symbolism may violate the phonological constraints of a language, or it may have eroded leaving no traces of its presence. It is thus possible for purely local conditions to override universals, and there may be no evidence of phonetic symbolism.

In some ways Kisi ideophones obey universal constraints more than does the rest of the language, e.g., in using CV syllable structure. In other ways, Kisi ideophones are idiosyncratic, e.g., in using labial-velars more than the rest of the language. The evidence is fairly inconclusive.

The “frequency code” (Ohala 1983) is another source for explanation, but its lack of comprehensiveness is evident. It has difficulties explaining such examples as those below, where high front vowels are used to convey a meaning of ‘large size’, the opposite of what is proposed by the frequency code.

(35) yii* 'huge'
     pim / pim-pim 'thunking'

Because of these similarities and differences with universal constraints, it seems unlikely that universals play anything but a peripheral role in determining the phonological composition of ideophones.

Another explanation is that ideophones draw their unusual phonological characteristics from nature, as an approximation of sounds in nature or through synaesthetic means. There are, however, many examples of Kisi ideophones representing sounds where the relation to the actual sound is tenuous at best. This lack of correspondence is the rule rather than the exception.

(36) c*lb 'defecating (of a duck)'
     p*lutu / p*lututu / p*lutu-p*lutu 'ripped out'

There is also the fact that many ideophones have nothing to do with sound. Ideophones usually appeal to tone of the senses, hearing being just one, and sometimes an ideophone will only enhance or emphasize the meaning of the verb.

(32) h*ol*ó 'emphasizes how something was uprooted'
     k*dd*á 'emphasizes how something is stuck'
     k*dd*í 'emphasizes the dryness of a hole or hollow'
It is thus difficult to posit any too direct relation between the sound of ideophones and their meaning.

4.3. Ideophones as an areal phenomenon

One important source for ideophones is external; ideophones are likely candidates for transfer from a neighboring language or from one's first language when using a second language, e.g., Nichols 1971, Mithun 1982. Because there was no immediate evidence for borrowing in the evidence I considered (except when Kisi speakers use second languages), I have not discussed the phenomenon here. Nonetheless, it is clear that a significant source for new ideophones is from neighboring languages. Perhaps the fact that the category of ideophones is such a robust one across Africa may suggest borrowing.

It has been shown above that ideophones form a class of words which is phonologically different from the other words in the language. Direct relations exist with other words and other word categories in a mutually feeding relation. The examples of 'trousers' (from 'flacid') and 'candy' (from 'sucked in') show clearly that ideophones can be tamed and enter other word categories. That there is an element of spontaneity and individuality within ideophones is also obvious; this fact is demonstrated by the continuum nature of their phonological resources and the difficulty in precisely identifying their meaning. It is likely that constraints in these areas proceed from universals, and thus in some sense ideophones arise from without the language in which they appear.

I have sedulously avoided answering in any detail the question as to why there is such a class of words (cf. Samarin 1971:161). The first answer is obvious, to serve the needs of expressiveness and individuality, i.e., to somehow make an utterance more remarkable or salient. Ideophones, by this reasoning, need to stand out against the background of the rest of the language. To be considered language, they must conform to some of the language's phonological constraints. Any statement beyond this involves speculation and explains very little. A better place to look for explanations is outside linguistics. An answer may be sought in examining non-linguistic universals, for example, in exploring the behavioral universal of expressiveness, certainly a human need and perhaps even a cross-species need.
APPENDIX: Kisi ideophones appearing in the text

bìlì/-lì... The strong, steady, and heavy flow of liquids, e.g., a gourd with a wide opening, male urination, a large wound or gash.

bông/bôông The condition of being sucked or drawn in, e.g., a person’s stomach when starving, a person’s cheeks when sucking on candy.

búúú Copious or plentiful peeling, e.g., as when pulling the bark off a tree, the condition of a badly scraped arm.

cá Something full up to the top, e.g., a bottle, glass, or even one’s stomach; or something wide open, e.g., one’s eyes.

cám-cám / cáng-càng Lukewarm, used for liquids.

cìng Staring intently or keenly, peering, looking closely or carefully.

cólọ The sound of a liquid splattering or being heavily poured or splashed, e.g., a duck or a human being with diarrhea defecating, heavy rain.

cônggôngcòọ Performing a hopping motion.

dàlì Something sticky, e.g., glue or paste.

dé-è-è ... Going along slowly, e.g., a person strolling, speech, dragging something.

dócù Hitting something, as a person by another person.

dônggu-dônggu Going on for an extended period, e.g., travelling towards a far off place.

féfélé/fófołó Light (in weight).

féfélé-féfélé / vélé-vélé Wheezing or sickly, e.g., the breathing of a very old person; dribbling, as in the trickling out of water.

félimèndéng Something coming out or appearing surprisingly or all of a sudden, e.g., a person emerging from a house, an axe head coming out of its socket.

fóngmgbéndéng Something coming out of a socket or appearing suddenly, e.g., a hoe or axe blade, something appearing from the interior.

fósákọ-fósákọ Roughly or crudely, disjointedly, e.g., taking a hurried bath.

fú-fú / fúl-fú Sound of rushing air, e.g., brushes slipping against one’s legs, trouser legs rubbing against each other.

gbólúng-gbólúng Something shaking or moving back and forth, e.g., a weaver’s shuttle; the sound of bells.
gbú-ú-ú  Sound of far-off thunder, or of palm fiber being stripped from branch.

hā-ā-ā... Continuing on for an extended period of time.

hélóng  Something leaving a set position, the way something comes out of a socket, as a hoe head comes out of the handle.

hèù-hèù  Sound made by a panting animal, e.g., a leopard or boar, a human being when angry.

hóólí  Being uprooted, as a large tree.

kádá  Being stuck or adhering, e.g., plaster on a wall, mud sticking to one's body.

kádí  Emphasizes the dryness of an area, as a hole for a well.

káfú  Grabbing or holding on to something tightly, e.g., a monkey grasping a branch; being hooked on to something, as a lantern on a wall.

káù/dáù  Immediately, right away, abruptly, all of a sudden, e.g., an eagle snatches something.

káyìàng-káyìàng  Moving unsurely, wobbling or rocking back and forth, e.g., the walk of a drunk.

kóóló-kóóló  Underscores the action of scratching or scraping, e.g., a cat with its claws.

kóólómbómbó  Everything, all of a quantity, as pots in a pile.

kócù  Hitting something, as a person by another person.

kpám-kpám  Aimless walking, wandering about without any purpose; sound of palm kernels being cracked.

kpāng  Someone staring at something intently, or with concentration, or someone listening carefully.

kpélé-kpélé  Climbing up steeply or straight up, e.g., an airplane taking off.

kpénggéng-kpénggéng/kpónggóng-kpónggóng  Sound of a bell.

kpíngmbí  Describes the darkness that comes with dusk or with an overcast sky, as when it's about to rain.

láási-láási  Being thoroughly mixed up, as the ingredients in a food dish; being confused.

lákpó-lákpó  Emphasizes licking, e.g., of a spoon or pan.

lézmù/lézmù-lézmù  Being flexible, as a branch.

lézmgbóng  Being flexible, as a branch.

(-lèngmgbòng)  Being flexible, as a branch.

léù-léù  Being flexible, as a branch.
<table>
<thead>
<tr>
<th>Word(s)</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>lɔndɔ/-lɔndɔ</td>
<td>Emphasizes floppiness, being flaccid, e.g., tail of cow.</td>
</tr>
<tr>
<td>mɔ̀sù</td>
<td>Being folded up tightly into a bundle, folded up compactly.</td>
</tr>
<tr>
<td>müi</td>
<td>Being nipped hard or sharply, being bit as by an insect, being pinched.</td>
</tr>
<tr>
<td>ngùèngngùè</td>
<td>Being folded up tightly or completely, as a load of clothes in a bundle.</td>
</tr>
<tr>
<td>ními-ními</td>
<td>Being sweet, as sugar.</td>
</tr>
<tr>
<td>pà / pál</td>
<td>Sound of water dripping or leaking.</td>
</tr>
<tr>
<td>pálálá / pélélé</td>
<td>Having cleared up, being transparent or settled, e.g., clarified palm oil.</td>
</tr>
<tr>
<td>pìà-à-à</td>
<td>Describes the action of cutting through the water sharply, as does a snake swimming.</td>
</tr>
<tr>
<td>pìm/pìm-pìm</td>
<td>Describes a thunking sound, e.g., people beating rice in a wooden mortar, a palm head falling on the ground, thwacking someone on the back.</td>
</tr>
<tr>
<td>pó / pó</td>
<td>Describes the impact of one object striking another, a knocking of something against something else.</td>
</tr>
<tr>
<td>pòlìkò (pòlìkò)</td>
<td>Being mixed thoroughly, as cement and water.</td>
</tr>
<tr>
<td>pùkèè</td>
<td>Sound of rice as it falls into a fanner when it is being winnowed.</td>
</tr>
<tr>
<td>pùlùtù/pùlùtùtù</td>
<td>Describes the sound grass makes when it is pulled out by its roots, the sound of trousers or cloth tearing, the sound of a small motorbike.</td>
</tr>
<tr>
<td>sānāā</td>
<td>Straight ahead, as when giving directions.</td>
</tr>
<tr>
<td>tènggèng (tèng-gèng)</td>
<td>Being straight up or erect, as a cobra.</td>
</tr>
<tr>
<td>tùng-tùng</td>
<td>Describing a throbbing pain.</td>
</tr>
<tr>
<td>vwùm</td>
<td>Sound of regular rhythmic beating, e.g., sound of someone's heart.</td>
</tr>
<tr>
<td>wà-à-à</td>
<td>Sound of rice being broadcast, or of rain gently falling, of food thrown in hot oil, of sand thrown on a sheet of galvanized zinc.</td>
</tr>
<tr>
<td>wàngmgbàng</td>
<td>Being wide open, as a door; being far off.</td>
</tr>
<tr>
<td>wìlè (-wìlè)</td>
<td>Cold with reference to water.</td>
</tr>
<tr>
<td>wèlì-wèlì</td>
<td>Being extremely cold, as during the early morning.</td>
</tr>
<tr>
<td>yàngmgbàng / yàngmgbàng</td>
<td>Being wide open, as a door.</td>
</tr>
<tr>
<td>yènggè-yènggè / yènggèng-</td>
<td></td>
</tr>
<tr>
<td>yènggèng-</td>
<td></td>
</tr>
</tbody>
</table>
yèngmgbèng Being delicately balanced, as a set trap.
yìkpe-yìkpe Describes violent shaking, e.g., the way the grass moves when a large animal is moving through it.
yìlí Underscores how big something is, e.g., a chief’s robe.

NOTES

1. A recent exception to this criticism is Andersen’s (1987) description of Lulubo phonology.
2. In Appendix A appear fuller glosses of ideophones referenced in the text. Several special conventions will be followed in the representation of the sounds of ideophones. The pitch range is considerably wider for ideophones than for other words in the language. A High-toned vowel in an ideophone represents a higher pitch than a vowel marked as High in, say, a noun or a verb. When necessary, a double accent (e.g., á) will be used for the Extra-High tone. Another convention is that a sequence of Falling tones indicates one long fall spread over a sequence of vowels. A sequence of vowels connected by hyphens indicates a drawn-out vowel, longer than a long vowel. The hyphen also represents the division between reduplicated parts.
3. This phoneme is phonetically an affricate.
4. That nasal vowels would appear in this environment is not unexpected. Nasalization often appears in conjunction with heavy air flow, such as that associated with the fricative h, due to the introduction of anti-resonances (zero’s), identical to the effects of nasalization (Ohala 1982).
5. This ideophone can be accompanied by a hand gesture, for example, imitating the path of a snake cutting through water.
6. In the non-ideophonic part of the language, v and w are allophones of the same phoneme, the former occurring before the high front vowels i and e and the labial-velar glide elsewhere.
7. There are also the related ideophones given below.

\[\text{fulú (–fulú)}\] ‘describes something closely missing (hitting something else)’

\[\text{fü-ú-ú}\] ‘describes sound of a match being lit, a strong wind blowing, someone falling from a tree’

This set of four related ideophones, all involving a semantic component of windy noise and beginning with a sibilant labiodental, suggest the route by which a sound symbolic cluster might begin to accrete around a core of direct sound-meaning correspondence. See discussion below.

8. See also \(\text{lènmgbòng (–lènmgbòng)}\) ‘flexible’.
9. The word for ‘cockroach’ comes from a reduplicated stem \(kpe\) and the noun class suffix \(-o\).

\[kpe + kpe + ø \rightarrow kpekòó\]

This derivation shows that the second labial-velar is underlyingly voiceless.

10. One reason for considering the high tone marked is that the high tone is the mark for a number of grammatical processes, e.g., focus marking, the distributive, etc. It is less common than the low tone, at least with regard to lexical tone on noun stems. When it functions lexically, it is not affected by grammatical tone processes; the low tone, on the other hand, is often raised, e.g., when proper names are found as direct objects. Another reason for considering the high tone the marked tone is that a high tone will not be displaced and will override a low tone. See Childs 1988 for a complete discussion.
11. Note how the falling tone has spread rightward and merged. Thus, we can see how adoption by an ideophone involves some nativization patterns the same as would a borrowed word. Note also how the initial falling tone has disappeared in the initial syllable in 'candy'.

REFERENCES


Marchand, Hans. 1959. Phonetic symbolism in English word-formation. *Indogermanische Forschungen* 64:146-68.


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