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WHERE DO IDEOPHONES COME FROM?*

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This paper begins with an analysis of ideophones in Kisi (West Atlantic, Guinea). This examination leads to consideration of the diachrony of ideophones, but because of the lack of data with any real time depth, we are limited to finding clues in the synchronic data. This study looks first at verbs, the class of words which Kisi ideophones resemble most closely. Such is also the case in other African languages, where ideophones can often be analyzed as verbs, as has been done for several Southern Bantu languages. I then demonstrate how Kisi ideophones can be derived from verbs, illustrating several possible scenarios for such a process. I then look at possible derivational relationships with other word categories, finding that with other word categories the direction of derivation is the opposite. For example, nouns are derived from ideophones but no vice versa. This generalization holds across other African languages as well and may be true for expressive language in general.

1. Introduction

This paper presents an answer to the question posed by the title of this paper by examining the links between ideophones and other word classes. The title actually poses two questions, the first of which we are incapable of answering in any but a general or highly speculative manner, that is, determining the ultimate origin of ideophones.

The more tractable second question asks, where do **new** ideophones come from once ideophones already exist in a language? The reply to this question is that ideophones come from verbs, as is shown by data drawn from Kisi (Atlantic Group, Niger-Congo) and other African languages. More importantly, the process of deriving ideophones from verbs via reduplication

accords well with universals of reduplication. I conclude by presenting suggestions as to the ultimate origin of ideophones.

The earliest discussions of the emergence of new ideophones often consist of anecdotal accounts detailing no specific process. While ideophones in many languages comprise an open and productive class, e.g., Ewe (Ansre 1961:49), they do not do so in every language, e.g., Swahili. Whether or not they form such a class is an empirical question and must be answered for every language individually.

One sort of claim for complete productivity is that ideophones can be created spontaneously. For example, Noss speaks of an elderly story-telling hunter 'creating a series of ideophones' (1975:149). Innes similarly states, 'New ideophones are sometimes coined by a story teller' (1964:18), which statement Samarin strongly questions, 'It is not enough to rely on the statements of a few informants who professed not to have known the ideophones (as Innes, in a personal communication, explains)' (1967:40).

Where explicit processes of ideophone creation have been detailed, one claim is that ideophones arise from within their own word class, as novel assemblages of ideophone partials. Maduka makes this claim for Igbo (1983-84) and Nembe (1988b); Awoyale states that for Yoruba ideophones consist of small, even non-concatenative, sound-symbolic morphemes ('phonesthemes' in the terminology of Bolinger, e.g., 1949), which combine to form new ideophones (Awoyale 1988).

Ideophones have also been analyzed as being derived from other word classes, most notably, from verbs. The two classes have always been seen as closely related, especially in Benue-Congo, e.g., Voeltz 1971. Although the directionality of the derivation is sometimes ambiguous, e.g., Noss 1985, in the majority of cases ideophones arise from verbs, in one case even from verbs with extensions (Nurse 1974). This process has been particularly well documented in Southern Bantu, e.g., von Staden 1977, and is common elsewhere in Bantu, e.g., Alexandre 1966. In the comments that follow, I discuss how just such a process can be identified in Kisi, despite their being no active synchronic processes in the language.

2. Ideophones and expressiveness

The short (and unhelpful) answer to the question of where ideophones come from is that ideophones arise out of the universal need for human beings to express themselves, to signal their individuality and their unique perception of events. That this need is universal can be seen in the presence of comparable classes in other (non-African) languages of the world, including

pidgins and creoles. A sampling of languages in which such words appear is seen below.

- (1) Iroquoian languages (Mithun 1982); Jamaican English (DeCamp 1974); Japanese (Frei 1970); Korean (Martin 1962); Lahu, Tibeto-Burman, Laos (Matisoff 1986); Malay (Carr 1966); Mayan languages (Durbin 1973); Middle English (Smithers 1954); Russian (Andersen 1988 p.c.); White Hmong, Miao, Thailand, (Ratliff 1986).

The universality of this need can be seen further in the fact that in languages where there are no ideophones, speakers employ other means to achieve the same ends, for example, through intonation and gesture (see Samarin 1973 for a full discussion of these issues).

An expansion to the short answer given above must state why there is a human need for expressiveness, a statement that is far beyond the concerns of this paper. Nonetheless, that the need for expressiveness is universal is established; what remains to be seen is the ways in which ideophones fulfill this need.

3. Ideophones and other word categories in Kisi

In the following discussion, I present the relationships between ideophones and other word classes, demonstrate the directionality of these relationships, and assess their productivity. Although the point of this section will be that ideophones are most closely related to verbs, ideophones also show links with other word classes. Ideophones are somewhat related to adjectives and nouns, and totally unrelated to syntactically important words, such as particles, prepositions, and pronouns.

3.1 Ideophones and nouns

Only a few cases of nouns and ideophones exhibit what could be construed as a derivational relationship. Ideophone-like nouns are usually derived from ideophone-like verbs by a regular process of nominalization. In the exceptional cases discussed below, nouns exhibit a more direct relationship with ideophones.

The examples below illustrate cases where the directionality is uncertain. Nouns related to ideophones follow the phonotactic (including tonotactic) constraints of the language (unlike ideophones). That the phonology of ideophone-related nouns is 'tamer' can be seen in the second and third sets of words (2b and 2c), where the raised register of the ideophone (indicated by the framing '+s'), is not associated with the noun.

(2) Ideophone → Noun ?

- | | | |
|-----|-------------------------|---|
| | H H H | |
| (a) | dong / dong-dong | id. 'quietly, silently' |
| | H H H | |
| | dongdongdo | nam. 'February (quiet month)' |
| | +HH+ | |
| (b) | mul | id. 'hard, sharp, bitingly, pinchingly' |
| | +HH HH+ | |
| | mul-mul | id. 'finely ground' |
| | LL H | |
| | mulyo | n. 'mosquito' |

(3) Noun → Ideophone ?

- | | | |
|--|---------------------|--|
| | +H H H H+ | |
| | kpele-kpele | id. 'straight (up), steeply, to the top' |
| | +H H+ | |
| | kpeleng | id. 'loudly, clearly, at a high volume' |
| | HH HH | |
| | kpeelaa | n. 'a tall, very straight palm tree with a smooth trunk and sometimes no fronds' |

The first two sets of examples (2a and 2b) hint at an ideophone-to-noun direction, and the last (3) suggests the opposite. In the first set, the name of the month probably comes from the ideophone. Not all informants were sure as to the time of the year *dongdongdo* represented, yet they were all familiar with the ideophone. Their unsurety suggests that the name of the month is newer, perhaps even a product of Western calendar-making. In the second set (2b) the same direction is likely because many animal names are onomatopoeic in origin and use reduplication (see below).

One piece of evidence for a noun-to-ideophone derivation, as in the final set of examples, is formal. The assonance of the ideophone is predictable; Kisi ideophones generally have the same vowel throughout. If the derivation is from ideophone to noun, there is no way to predict which vowel will appear in the noun. More importantly, however, one informant stated that the ideophones *kpele-kpele* and *kpeleng* come from the noun.

In the examples appearing below, the directionality of the derivational relationship is straightforward: nouns are derived from cognate ideophones.

The justification for this claim is based on the semantics of the new nouns. Both 'trousers' (4a) and 'candy' (4b) are relatively new concepts for the Kisi people, arising only recently from contact with Western culture. Assuming that the ideophones were part of the lexicon before trousers were part of the Kisi wardrobe and candy a part of a child's intake, we can hypothesize that the Kisi words representing 'trousers' and 'candy' date back only to the introduction of these items into Kisi culture.

- (4)
- | | | |
|-----|--|-----------------------------|
| (a) | F H F H | id. 'flaccid, floppy' |
| | IOnDŌ / (-IOnDŌ) | |
| | H L H | |
| | IOnDŌngndo | n. 'trousers' |
| (b) | F HL | id. 'sucking or drawing in' |
| | bŌng / bŌŌng | |
| | L H H R HL H | |
| | bŌmbŌngndo / bŌngbŌŌngndo ¹ | n. 'candy' |

3.2 Ideophones and adjectives

As with nouns, no storable processes link adjectives and ideophones. Kisi has a relatively large number of underived adjectives and a productive process deriving adjectives from verbs. Kisi adjectives can be identified by their morphosyntax, as in the sequence illustrated below (NCP = noun class pronoun; NCM = noun class marker). Adjectives follow nouns they modify and show agreement by affixing the noun class marker (suffix) of the noun they modify. The noun class marker of the noun is replaced with its respective pronoun, except in the case of *o*-class nouns, where noun stems appear without a pronoun, as in 'pineapple' below.

- (5) [[Noun]_N [Adj]_A]_{NP} → Stem+NCP Adj+NCM
- | | | |
|-----|---------------------------|--------------------------------|
| (a) | H H | id. 'widely, far' |
| | wangmgbang | |
| | H LH H H H H | |
| | wundEi+la wangmgbang+iang | |
| | window+NCP open+NCM | 'wide open windows' |
| (b) | +H H H+ | id. 'broken into small pieces' |
| | musuku | |
| | L L H H HL H | |
| | bEIE+0 musukuu+o | 'a pulverized pineapple' |
| | Stem+NCP Adj+NCM | |

In the second example (5b) the ideophone used as an adjective has the tonal pattern associated with derived adjectives (HL). It seems likely, then, at least in this last example, that the adjective is derived from the ideophone, and one can assume that derivation is generally in this direction. Adjectives, similarly to nouns, seem an unlikely source for new ideophones.

Thus far I have demonstrated the non-productive relationships that exist between ideophones and nouns, and between ideophones and adjectives. Where relationships exist, the directionality has been uncertain, and there have been no suggestions of productivity. I now consider ideophones and verbs, the latter being the class to which ideophones are most closely related.

3.3 Ideophones and verbs

The first fact that emerges in a consideration of ideophones and verbs is that many more verbs than nouns or adjectives show affinities with ideophones. It is furthermore apparent that the relationship between verbs and ideophones, both formal and semantic, is direct. Ideophones also share morphosyntactic features with verbs. The similarities between verbs and ideophones, however, are not extensive enough to support the claim that Kisi ideophones are actually a sub-category of verbs, as has been claimed for other African languages, especially those in southern Africa (Fortune 1962, Kunene 1965). The features shared by Kisi verbs and ideophones are given below.

- (6) 1. Reciprocal co-occurrence restrictions
2. Syntactic proximity
3. Appearance after *co* and *wa*² (auxiliary / copula)

Reciprocal co-occurrence restrictions signify that ideophones co-occur with few verbs and that verbs often co-occur with only a few ideophones. These tendencies culminate in a situation where a verb takes only one ideophone, and that ideophone appears only with the one verb. The tightness of such co-occurrence restrictions is illustrated below. The first ideophone (7a) occurs with only one verb, the second (7b) with two, and the third (7c) with three.

(7)	<table style="border-collapse: collapse;"> <tr> <td style="padding-right: 10px;">(a)</td> <td style="padding-right: 10px;">H L</td> <td style="padding-right: 10px;">'warm, hot'</td> <td style="padding-right: 10px;">L LH</td> <td style="padding-right: 10px;">tuIOO</td> <td style="padding-right: 10px;">'to be warm or hot'</td> </tr> </table>	(a)	H L	'warm, hot'	L LH	tuIOO	'to be warm or hot'
(a)	H L	'warm, hot'	L LH	tuIOO	'to be warm or hot'		
	<table style="border-collapse: collapse;"> <tr> <td style="padding-right: 10px;">(b)</td> <td style="padding-right: 10px;">H</td> <td style="padding-right: 10px;">'full, wide'</td> <td style="padding-right: 10px;">LL H</td> <td style="padding-right: 10px;">pelyo</td> <td style="padding-right: 10px;">'to be full'</td> </tr> </table>	(b)	H	'full, wide'	LL H	pelyo	'to be full'
(b)	H	'full, wide'	LL H	pelyo	'to be full'		
	<table style="border-collapse: collapse;"> <tr> <td></td> <td></td> <td></td> <td style="padding-right: 10px;">LL LH</td> <td style="padding-right: 10px;">biOndOO</td> <td style="padding-right: 10px;">'to open'</td> </tr> </table>				LL LH	biOndOO	'to open'
			LL LH	biOndOO	'to open'		

	H			LLH	
(c)	cing	'keenly'		nuaa	'to stare at'
				L LH	
				tofaa	'to look at'
				LH	
				cOO	'to see'

A second morphosyntactic feature ideophones share with verbs is syntactic proximity. Ideophones typically appear clause-finally after a verb (first three examples, 8a, 8b, 8c) or adjective (last example, 8d).

- (8)
- | | | | | |
|-----|-----------------|-------------------|--------------------|-------------------------------|
| | L | LH | +HHH+ | |
| (a) | ma pel | fikiki | | |
| | Pro fill | Id | | 'It filled (it) all the way.' |
| | L L | L L | HH HH | |
| (b) | ma co | huno | fEIE-fEIE | |
| | Pro Aux | come-out | Id | 'It's dribbling out.' |
| | L H L | LLR | H H L L L | |
| (c) | billo co | hiliOngndo | yikpE-yikpE | |
| | grass Aux | shake | Id | 'The grass is shaking a lot.' |
| | L L L | LLL LH | +H H H H+ | |
| (d) | o co o | luElyaa | nyEIE-nyEIE | |
| | Pro Cop | NCP sharp | Id | 'The knife is razor sharp.' |

Note how the ideophone comes after the non-finite form of the verb in the second and third examples (8b and 8c) rather than after the auxiliary **co**, which is marked for tense, aspect, and polarity. This stands in contrast to the syntax of non-subject arguments. These elements appear before the verb (and after the auxiliary) in compound-verb constructions, as is represented schematically below.

- (9) Simple NP Verb (NP) (NP) Id
- Compound NP Aux (NP) (NP) Verb Id

Although ideophones appear peripheral to the structure of the sentence, they do seem attached in some way to the verb itself.

Ideophones have in common with verbs that they appear after **co** and **wa**, words that double as copulas and auxiliaries. When verbs appear in **co** constructions, they have either a progressive or future meaning, as represented in the examples below.

- (10) Prog L HH L L H LLH F H
 num bEE a co ya malaa capo
 you indeed you are me help a-lot
 'You indeed are greatly helping me.'

Fut L L LL H R
 o co hau kandOng
 it Aux today start
 'It will be started today.'

Ideophones can appear in exactly these constructions.

- (11) L L R HH
 o co ting kpiling 'It is a little heavy.'
 Pro Cop little ld
- LLH F L L LH H H H H
 peeleng ndeng le co boo wEmtu-wEmtu
 leaf this it Cop very ld
 'This sheet (of paper) is quite thin.'

Because of these shared features, speakers would be expected to identify ideophones with verbs. This fact, coupled with the use of reduplication by both ideophones and verbs, illustrates the close relationship between the two word classes.

There are environments in which the relationship is even closer. Many ideophones seem to be reduplicated forms of the verb with which they have close semantic associations.

- (12) HH L HH L
 (a) laasi-laasi id. 'stirred or mixed up, confused'
- LL LH
 laasia v. 'to mix; to play tricks, to act foolishly'
- L HH F H
 (b) hingahingangndo id. 'back and forth, in and out'
- L H
 hingndo v. 'to revolve'

Verbs have a reduplicated form which conveys plurality of action or argument. These forms are similar to cognate ideophones.

- (13)
- | | | |
|-----|---------------------|---|
| (a) | HH HH | |
| | wee-wee | id. 'cut into small pieces' |
| | LL H LL H | |
| | wiyo / weiyo | v. 'to throw (something), esp. small rocks' |
| | LL LL H | |
| | weiweiyo | v (pl). 'to throw small rocks (at something)' |
| | | |
| | HL HL | |
| (b) | kili-kili | id. 'describing quick footsteps of small animals in the night, pitter-patter' |
| | LL L LL L | |
| | klolu / kelu | v. 'to cut' |
| | LL LL | |
| | kilikili | v (pl). 'to cut into small pieces' |

The following representative pairs exhibit relationships where the ideophone is almost an exact copy of the verb.

- (14)
- | | | |
|-----|-----------------|--|
| (a) | HH | |
| | tiu | id. 'curvaceous' |
| | LL | |
| | tiu | v. 'pervade, go around, spread throughout' |
| | | |
| | HHL | |
| (b) | buuu | id. 'plentiful peeling, copious scraping' |
| | LL | |
| | buu | v. 'to peel or scrape' |
| | | |
| | F H L H | |
| (c) | tEIEkEIE | id. 'smooth and slippery' |
| | L LL L | |
| | tEIEka | v. 'to smooth out or over' |

Often ideophones are used with their cognate verbs, as shown below.

- (15) **L LL LH L H HHL**
o buu boo yOmndo buuu
 he peel bark tree id
 'He really peeled the bark off the tree.'

L LL R HHL
 o buunung buuu
 it peel-Mid Id
 'It peeled everywhere.'

L LHH L H FH LH
 o tEIEka IEngndeng tEIEkEIE
 he smooth ground Id
 'He smoothed the ground thoroughly.'

These facts can be rearranged into what can be presumed to represent a diachronic process. A verb is reduplicated for emphasis (cf. the morphological reduplication used to convey plurality). For greater emphasis the second part may be formally altered, either prosodically, with extra-high tones, or segmentally, e.g., by changing a vowel. This step is not absolutely necessary as shown by the ideophones that are segmentally identical to the verbs from which they arise. This item is then reanalyzed as a separate element. A schematic representation of the different possibilities, all attested in Kisi, appears below. In all cases there are formal and semantic similarities between the forms at each stage. The stages are arranged in the order in which they may have occurred. Stage one thus represents the earliest stage and the fifth stage a possible final stage. An actual example from Kisi follows.

(16)	<u>Verb</u>	<u>Redup. vb</u>	<u>Ideophone</u>	
1	+	-	-	
2	+	+	-	
3	+	+	+	(Reanalysis)
4	-	+	+	
5	-	-	+	

(17)	'to taste good'	LL yela
1) reduplication of verb for emphasis	LL LL yela-yela	
2) erosion / partial reduplication	LL L * yela-ye	
3) reanalysis as separate morpheme, tone raising	LL H yela ye	
4) ideophone reduplicated	LL H H yela ye-ye	
5) ideophone used with other verbs	*	

Although many traces remain, in Kisi the process is no longer active.

A final step is to consider ideophones that are related to each other, the incestuous relationship which may eventually lead to sound symbolism.

3.4 Ideophones related to each other

Sets of ideophones appear in what can be interpreted as derivationally related forms. In many African languages these relationships are common among the ideophonic part of the lexicon, more so than in other parts of the language, occasionally displaying a great deal of systematicity. Shared partials in many ideophones can be isolated as possessing identifiable meaning. These partials can be recombined to form new ideophones. Bolinger (1940) has labelled the diachronic process 'accretion', and Samarin (1989) refers to the resultant phenomenon as 'clustering'. In another paper (Childs 1988) I call it 'neutralization', focusing on the fact that segments which contrast elsewhere do not contrast among some sets of ideophones. In Kisi no systematicity appears, yet there is enough phonetic similarity among semantically related ideophones to hint that such systematicity is possible, as illustrated below.

- (18)
- | | | |
|-----|---|---|
| (a) | $\begin{array}{cccc} \text{H} & \text{H} & \text{H} & \text{H} \\ \text{dOnggu-dOnggu} \end{array}$ | 'going on for a long time' |
| | $\begin{array}{cccc} \text{L} & \text{H} & \text{L} & \text{H} \\ \text{donggo-donggo} \end{array}$ | 'lasting a long time or happening repeatedly' |
| (b) | $\begin{array}{cc} \text{H} & \text{H} \\ \text{yeng-yeng} \end{array}$ | 'alert, clear, (ears) wide open' |
| | $\begin{array}{cccc} \text{H} & \text{H} & \text{H} & \text{H} \\ \text{yengge-yengge} \end{array}$ | 'delicately balanced, about to topple' |
| | $\begin{array}{cccc} \text{H} & \text{H} & \text{H} & \text{H} \\ \text{yenggeng-yenggeng} \end{array}$ | 'balanced, alert, listening carefully' |
| | $\begin{array}{ccc} \text{HH} & \text{HH} & \text{HH} \\ \text{yEIEng / yEIEng-yEIEng} \end{array}$ | 'slowly, gently, delicately' |

If we assume that each set of examples represents one ideophone, we can see how contrasts elsewhere in the language are suspended in the ideophonic subsection. Back vowels are in free variation in (18a), and in (18b) we see even sequences differing even in syllable structure can mean the same thing. A potentially meaning-bearing unit, for example, would be the non-concatenative *d...ngg...*, as in (18a).

3.5 Summary

From this discussion of ideophones and other word classes, we see that ideophones and verbs form a closer bond than do ideophones and any other word category. That ideophones show more affinities with verbs than with other word classes is registered quantitatively and in the close formal and semantic similarities.

Besides the clustering that is a harbinger of sound symbolism, we see more clearly how ideophones are derived from verbs. The process can be seen as consisting of two steps.

- (19) 1. Reduplication. A verb is repeated for emphasis.
2. Reanalysis. The repeated verb is analyzed as a separate word. This stage may be accompanied by segmental and tonal changes.

I now consider ideophone derivation in other African languages, many of which possess fully productive processes for deriving new ideophones from verbs. The process we have identified in Kisi is just one of several types.

4. New Ideophones In other African languages

Language-specific processes can be separated from universal ones. In actual fact, all processes are particular to a language, but some are shared with many languages and may be universal. The display below presents an overview of the processes under consideration.

(20) <u>Universal</u>	<u>Language-specific</u>
Onomatopoeia	Accretion
Sound symbolism	Sound symbolism
Borrowing	Reanalysis
	Productive derivational processes

4.1 Language universal processes

Although the extent to which forms said to be onomatopoeic truly imitate sounds of nature is problematic, most onomatopoeic forms draw their substance from speakers mimicking sounds in nature. In some sense onomatopoeic forms are significantly different from ideophones. Only a relatively small proportion of ideophones are usually based on sound, e.g., Samarin 1965. Nonetheless,

there is a process by which onomatopoeic forms become ideophones and even verbs, as has been noticed by others, e.g., Alexandre (1966:24). Some examples of onomatopoeic ideophones and cognate forms are given below.

(21)	L L L L L L	
<u>Gbaya</u>	kutu-kutu-kutu	'rumble of a car motor'
	L L L L	
	kutu-kutu	'automobile' (archaic)
	L H H L L	
	kOkengge-kOO	'cock-a-doodle-doo'
	L H H	
	kOkengge	'rooster' (literary)
		(Noss 1985:246)
<u>Swahili</u>	piki-piki	'motorcycle'
	tinga-tinga	'tractor'
	H H HH HH	
<u>Kisi</u>	kukuluukuu	'crowing of a rooster'
	LL LH	
	nyaayoo	'cat'
	HH HH H	
	ngOOng-ngOOngndo	'bullfrog'

Directionality is clear. Note the presence of reduplication in several forms (underscored by the insertion of hyphens); both reduplication and onomatopoeia are important for animal names (e.g., Hill 1972) and for naming noisy machines. This process of naming by onomatopoeia has been extended to naming by ideophones having no connection to sound.

(22)	L H HH	
<u>Bulu</u>	angengaa	n. 'dragonfly'
	L H HH	
	angengaa	id. 'small and thin'
		(Alexandre 1966)

Another non-arbitrary association of sound and meaning is between the voiceless labiodental fricative and turbulent-air ideophones. The noise of the sound [f] at the approximation of lip and upper teeth is caused by air turbulence. Much of the association is onomatopoeic, as represented by the Kisi examples below.

- (23) **H L L**
fa-fa-fa ... 'sound of scything grass'
- H H H H**
faka-faka 'moving fast'
- HH HH HH**
fee / fee-fee 'being blown, as a whistle or a horn, breathing'
- HH**
foo 'wind whistling'

Controversial as the issue of universal sound symbolism may be, a considerable body of literature supports the idea of **limited** universal sound symbolism (Jakobson & Waugh 1987). The non-arbitrary relationships identified universally, however, may be overridden by language-specific constraints. Furthermore, sound-symbolic associations typically constitute only a small proportion of a language's lexicon. The importance of sound symbolism as a source for new ideophones, then, is limited.

One such universal, the association of small size with high front vowels and high pitch, has been extensively documented, e.g., tonal iconicity in Bini (Wescott 1973). Examples from Nembe and Kisi appear below. The first pair of Kisi adjectives illustrates how an adjective with low back vowels may be transformed by the addition of a high-toned affix with a high front vowel.

- (24) Nembe I → [-large]
- Kisi **L L**
pOmbO 'small'
- L HHH HH**
pOmbulinaa 'very small'

Ohala (1984) has labeled this correspondence the 'frequency code', relating it to a cross-specific evolutionary adaptation. The (onomatopoeic) ideophones from Kisi given below illustrate this relationship.

- (25) **HH L HH L**
dilyE-dilyE 'cry of baby chickens'
- H LL H LL**
cOIOO-cOIOO 'sound of heavy rain or poured water'

Borrowing also constitutes an important expressive resource for speakers of a language. Borrowed words often retain their expressiveness by resisting nativization. For example, in Temne borrowed names violate the language's phonotactic patterns, forming a word category of their own (Nemer 1987), much

in the same way ideophones do. Pidgins used by African speakers notoriously borrow ideophones (Noss 1975:146).

Below appear some examples of borrowings converted to ideophones in Bulu. (The particle *ne* often marks the following word as an ideophone.)

- (26) L H L
 ne fonɔs 'repulsive' < English 'punish'
 L L H L H
 ne didon-didon 'flirtatiously' < French 'dis-donc'
 (Alexandre 1966)

It is universal processes such as onomatopoeia, (universal) sound symbolism, and borrowing that serve to supplement the expressive resources of a language in general, and of ideophones in particular. No one process, however, contributes in any major way to the augmentation of the word class of ideophones. I now turn to several language-specific processes.

4.2 Language specific processes

A number of language-particular processes also provide for the creation of new ideophones. A necessary preliminary step for the existence of a productive system of phonesthemes or (local) sound symbolism depends on a process of accretion (Bolinger 1940).

Accretion is the process by which language-particular non-arbitrary sound-meaning correspondences are built up, namely, the building of sound-symbolic associations. The original associations, of course, are completely arbitrary, as are the first similar sound-meaning correspondences, but then both sound and meaning changes provide a set of correspondences. Structure can arise in a self-organizing way (Lindblom 1986). Sound symbolism is present when these associations reach some undefined critical mass.

Sound symbolism is a relatively pervasive association of a sound pattern with a specific meaning. As shown above, there are universal associations of this type; there are also local, language-specific associations. In an intermediate stage, patterns of association exist which have arisen from changes of the sort described in languages with documented time depth.

- (27) ham hEm hal hEl pal pEl (Samarin 1989)

The sound-meaning correspondence could have begun with one ideophone and gradually attracted other ideophones, which subsequently changed their form, their meaning, or both. Productive sound symbolism is illustrated below.

A second type of productive derivational process, discussed above, features recurrent partials that recombine productively, as exemplified below:

(30) Nembe phonesthemes (Maduka 1988b:107)

m ₁	→	[+SOFT]
kp ₁	→	[+WELL-MARKED]
gb ₁	→	[+WELL-MARKED]
L L L L L H		
kpokorokpokoro		LARGE(R) <u>and</u> ROUND <u>and</u> WELL-MARKED
H L H H		
gbodoroo		LARGE(R) <u>and</u> ROUND <u>and</u> WELL-MARKED
L L L L L L		
mōgolo mōgolo		SOFT <u>and</u> SMALL <u>and</u> THIN
L L H L L L		
mūgurumūguru		SOFT <u>and</u> LARGE <u>and</u> ROUND

(31) 'psychomorphs' in Igbo (Maduka 1988a)

k_m (medial [k] or [g])	'back and forth'
regerege	'swinging side to side'
kwakakwaka	'shaking side to side'

(32) Non-concatenative phonesthemes of Yoruba (Awoyale 1988)

i	'hard, solid'	u	'sealed off'
r-g-d	'largeness'	p-l-b	'flatness'
gbirigidi	'of solid matter rolling with much impact'		
rigidi	'round, solid, massive'		
ragada	'very wide'		

These examples illustrate a highly productive system of language-specific sound symbolism.

Thus far I have sketched out a number of processes for the creation of new ideophones. Cross-linguistically and within Kisi derivation from verbs stands out as the most common. It can even take several forms, in some languages being an entirely productive process.

5. Implications and conclusion

It has been shown that with sufficient ingenuity and imagination, we can identify a process of ideophone derivation in Kisi that was probably once more

active in the language, replicating a process found in many other African languages. We should not be surprised that verbal reduplication serves as the primary source for new ideophones. Their close relationship to verbs recommends this analysis and may raise something of a chicken-egg question, were it not for the derivational directionality we have been able to establish.

That the process used is reduplication is also not surprising. Reduplication is a universal process; other facts about ideophones fall into line with consideration of universal features of reduplication.

- (33) 1. Reduplicated structure entails the meaning of its non-reduplicated part (implying that reduplication is semantically additive)
2. Conveys quantity of referents and amount of intensity
 3. Can also convey word class change (Moravcsik 1978)

Ideophones clearly add an extra dimension of meaning, as in Moravcsik's first point. They certainly convey intensity, typically in the action itself. Verbs represent the strongest candidate for the location of such information, as was exemplified in Kisi verb pluralization. There has also been a word class change, as in her third point, i.e., from verb to ideophone.

On the basis of the facts of Kisi and other languages coupled with universals of reduplication, we can make a strong prediction about the relationship between reduplication and ideophone derivation. The prediction is that if there is a process of ideophone derivation, it will involve reduplication, and probably reduplication of verbs. The process need not be synchronically active and may even be overridden by language-specific considerations. In Kisi we observe a situation where the formal resources of the universal process have been usurped by verb pluralization. Nonetheless, traces of ideophone derivation by reduplication exist.

In conclusion, I recommend we view the issue of ideophone derivation in terms of a concern with universals. Cross-linguistic comparisons show that ideophone-like words are found in many, if not all, languages. Furthermore, I have shown how ideophones exploit a universal morphological process in augmenting their number, even suggesting that the production of ideophones in such ways is also a universal. To find out what is truly universal and basic, even creative about human language, one needs to examine expressive language, especially when it manifests itself so prominently in a language as do ideophones in African languages.

To return to the unanswered second half of the question posed by the title of my paper, we may have some clue as to the ultimate origin of ideophones. If ideophones were not originally ideophones, then they were probably verbs. The only problem now is to identify where the verbs come from.

NOTES

Unusual conventions used in this paper

'+' The '+' (plus sign) before one or more tones representing a raised register with the next '+' representing the end of that raised register.

'-' Reduplicated parts of an ideophone are separated with a '-' (hyphen).

Typographical conventions

ng	the velar nasal
ny	the palatal nasal
c	the voiceless alveo-palatal affricate
L	low tone
H	high tone

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¹ The word for 'candy' may represent a borrowing from French, as has been suggested by several commentators, but such a derivation is unlikely. The reduplicated form is usually the newer of reduplicated and non-reduplicated forms. Furthermore, French-Kisi bilinguals showed no awareness of such an etymology (as they did in other cases). Tonal evidence also argues against borrowing: on the basis of other borrowings, tones on the putatively borrowed form would be different than the tones actually found.

² *Co*, roughly speaking, is the present form and *wa* the past. What is true for one form is true for the other.

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